

Index to Volume 21 (1979) of IR/D

Bold type refers to issue numbers in Vol. 21 of Industrial Research/Development. Light numerals indicate page numbers.

- A -

Abrasion resistance 6, 143, 7, 107, 12, 25
Absolute zero 11, 51
Absorption chillers 5, 35
Absorption coefficients 2, 47, 6, 67
Absorption spectrometry 2, 47, 9, 92, 10, 146
Absorption trapping 9, 61
Academic R & D 1, 34, 11, 31, 32
Accelerated depreciation 11, 110
Accelerating rate calorimeter 10, 141
Accelerator 5, 116, 9, 52
Accelerometers 10, 42
Accurate measurements 7, 11, 99, 8, 75, 9, 129, 10, 225
Achema 12, 37
Acidity sensor 10, 42
Acid rain 10, 42
Acoustic characteristics 5, 104
Acoustic signal 7, 92, 9, 94, 10, 125
Acrylic plastic 11, 196
Active nuclei 2, 88
Active Stimulation of the Auroral Plasma (ASAP) 9, 88
Adhesion 6, 135, 143, 8, 94, 10, 230, 11, 198
Adsorbent phase 2, 112, C16, 3, C3
Aerial spraying 7, 121
Aerodynamic drag 2, 70, 6, 117, 9, 30, 10, 54, 11, 41
Aerodynamic forces 5, 133
Aerodynamic heating 4, 31
Aerodynamic moment 1, 60
Aeronautical R&D 6, 92
Aeronic farming 3, 28
Aerosol 2, 129, 6, 74
Aerospace technology 1, 127, 2, 48, 151, 7, 50, 151, 11, 74
Aftershock 10, 42
Agricultural technology 2, 48, 5, 38, 108
Agricultural wastes 1, 27
Airborne data collection 4, 137
Air bubble 9, 134
Air compressors 8, 84
Air conditioning system 6, 129, 10, 43
Aircraft compressor link 10, 118
Aircraft engines 5, 28, 12, 36
Aircraft survivability 5, 27
Aircraft design 4, 88, 11, 135
Air currents 9, 129
Air-drag reductions 1, 127
Air exchange 10, 36
Air movement 6, 43
Airplane hanger 3, 22
Airplane-helicopter 1, 127
Air pollution 3, 48, 4, 41, C7, 10, 42, 11, 56, 12, 21, 46
Air segmentation 9, 134
Air-supported dome 3, 131
Albatross 5, 27
Alcohol 3, 62, 9, 30
Alienation 9, 114
All-angle miller 1, 21
Alloys 9, 83, 11, 135
Alloys 9, 83, 11, 135
Alumivum 10, 42
Alternate energy technology 1, 34, 2, 49, 60, 7, 76, 12, 65
Aluminum flakes 7, 103
Aluminum refining 10, 3, 11, 135
Aluminum foil embossed roofing 10, 43
Amalgamation 9, 124
Amalthea 5, 47
American Crystal Sugar Research Center Research Lab 5, 3, 108
American institutions 9, 114
American Vacuum Society 8, 107, 12, 99
Amino acids 9, 42
Ammonia 3, 70
Amplitude objects 3, 91
Anabasis 10, 11
Anaerobic adhesives 8, 94
Anaerobic decomposition 12, 66
Analog multimeters 8, 90
Analog servo systems 10, 163
Anal og signal record problems 10, 152
Analytical chemistry 3, 103
Analytical commentary 2, 17
Analytical instruments 2, 3, 96, 100, 10, 82, 12, 29
Analytical mass spectrometer 10, 82
Anemometer 6, 183
Angular scattering photometer 2, 129
Annealing 9, 40, 11, 141
Anodic stripping voltammetry 9, 124
Antarctic research 11, 56
Antenna phenomena 7, 103, 9, 96, 11, 50
Antibacterial coatings 8, 48
Anti-log coating 10, 183
Antimatter 2, 194, 7, 84, 12, 56
Antistatic coatings 8, 48, 11, 196
Antisubmarine warfare 6, 43
Anti-technology prejudice 5, 27
Antitumor agents 5, 15
Apparent value determinations 7, 97, 8, 75, 9, 129
Appearance 8, 69
Applied research 3, 22, 4, 103, 7, 92, 11, 54, 90, 98

Arc furnaces 7, 49, 10, 73
Archaeological problems 4, 57
Architectural 5, 3, 108
Arc resistance 2, 117
Arc spray gun 4, 119
Argon-36 2, 85, 3, 69
Argonne National Laboratory 10, 110
Ariane launch vehicle 4, 90
Armak Co. 10, 130
Axial-flow turbines 1, 27
Army Satellite Communications 10, 102
Agency 10, 102
Aromatic-heterocyclic polymers 11, 198
Array processors 10, 157
Arsenic 5, 15
Arsenite ions 4, 17
Artificiality 4, 169
Artificial harbors 7, 149
Aspherical lenses 11, 32
Aspiration 9, 134
Assessing R & D projects 1, 100
Asteroids 11, 189
Astromat 3, 131
Astronomy 9, 183
Astronomers 2, 194, 7, 81
Astrophysical phenomena 6, 92, 11, 50
Atlas booster 6, 35
Atmospheric pressure 10, 167
Atmospheric processes 6, 111, 7, 64, 8, 45, 9, 29
Atoll 7, 49
Atomic absorption spectrophotometer 10, 82
Atomic arrangement 11, 112
Atomic energy 5, 90, 8, 38, 11, 138
Atomic planes 6, 35
Atomic relaxations 9, 218
Atomic vapor quantum counter 7, 50
Attenuation 7, 103, 8, C1, 12, 68
Attractiveness 1, 107
Auger electron spectroscopy 1, 107
Auroral return current 9, 88
Automated equipment 6, 139, 8, 62, 10, 152
Automated injector 9, 134
Automatic samplers 7, 86, 9, 134
Automatic shut-down process 5, 54
Automatic Station-Keeping system 9, 94
Automatic tuning 2, 47
Automobile industry 6, 117, 9, 29, 11, 23, 12, 25, 65
Automotive propulsion systems 6, 117
Auxiliary electric power 5, 28
Auxiliary pump 10, 167
AVS Standards 12, 99

- B -

Bachelor women 8, 153, 9, 215
Background spectrum 1, 80, 3, C3, C6
Backscatter peak 6, 105, 123, 11, 121
Backstreaming 8, 84, 10, 167
Bacterium 5, 89, 6, 83, 12, 74
Balance of payments 4, 48
Ballons 6, 43
Barnacle adhesive 8, 94
Basic research 1, 77, 3, 32, 67, 4, 103, 10, 146, 11, 54
Bathymetric instrument 6, 43
Battery R & D 1, 64, 127, 3, 22, 5, 56, 9, 30, 10, 35, 183, 12, 38
Bauxite 11, 135
Beach erosion 5, 28
Beam deflection 4, 209
Beam director 7, 86
Beam optics 7, 80, 9, 146
Bell curve 8, 75
Benthic phenomena 4, 17
Bezoar 12, 56
Big bang 2, C1
Bimodal SEC 1, 51
Binary stars 10, 89
Bioanalytical research kit 5, 36
Biological hazards 2, C16, 12, 51
Biological research 3, 22
Biological wind prospecting 1, 28, 88
Biomass conversion plants 2, 60, 5, 28, 4, 169
Biomedical electrodes 8, 62
Bionic ear 8, 43
BIRD Foundation 3, 91, 12, 82
Birth control 12, 135
Blackbody thermal radiation 10, 225
Black hole 2, 88, 8, 44, 12, 54
Blackouts 3, 48
Blood-analysis 5, 166, C1
Blower 6, 129
Boiler tube 12, 90
Bolt tightening and loosening 6, 139
Booster system 9, 52
Boranes 12, 51
Boron 2, 49
Boron carbide 4, 131
Boron nitride 6, 143
Boson 10, 41, 12, 51
Boundary layer acoustic monitor 4, 31
Braking power 5, 200
Braking 1, 127, 2, 70, 117, 7, 55, 10, 62
Brand identification 12, 19
Breadwinner 9, 215, 11, 200

Breath test 9, 30
Breeder reactor 1, 22, 3, 22, 4, 131, 5, 97, 7, 144, 11, 137
Brightfield illumination 3, 90
Broadcast satellites 3, 91
Broad line gamma ray spectrometer 1, 38
Broadcast satellite service 11, 64
Brushite 4, 17
BTU accounting 7, 33
Bubble memory 5, 45, 6, 36, 11, 32
Budget FY 1980 1, 77, 3, 32
Buffer jacket 12, 68
Buffer storage element 10, 152
Bulk conductivity 7, 103
Bullet comparison 3, 85
Bunker fuel 4, 82
Burning rates 3, 115
Burst pressure 10, 102
Bus bars 7, 55, 10, 62
Buses 4, 25, 74, 103
Business administration 5, 27, 9, 114, 11, 11
Business computer system 10, 94
Buying power 3, 77, 11, 192
By-products 8, 38

- C -

Cabot Corp. 10, 122
Cadmium sulfide copper sulfide 3, 40
Calaveras Fault 10, 42
Calcium phosphate 4, 17
Calculators 8, 75, 10, 15
Calibration parameters 2, 105, C1, 5, 129, 12, 99
Callisto 5, 47
Calorimeter 5, 116
Cancer 5, 15, 90, 165, 8, 42, 12, 82
Capacitance transducers 10, 160
Capacitors 2, 11, 53
Capillary columns 3, C3, 9, 142, C1, 10, C12
Capital expenditures 1, 77, 100, 103, 11, 98
Carbide production 2, 122
Carbon dating 4, 57, 12, 74
Carbon dioxide 7, 66, 10, 29, 11, 31, 53
Carbon monoxide 2, 122
Carbon particles 7, 33
Carbothermic reduction 2, 122
Carburetor systems 4, 80, 11, 121
Cardiac pacemaker batteries 10, 35
Cardiovascular disease 5, 15
Cartooning 11, 82
Casein 6, 73
Casagrain reflecting mirrors 7, 81
Castings 5, 28
Catalytic agents 7, 92, 11, 42
Catalytic gas electrode 11, 31
Catecholamines 7, C1
CAT scanning 12, 51
Cave 9, 68
Cavitation 12, 90
Cavitons 9, 88
Celestial mechanics 2, 194, 10, 58
Cell efficiency 3, 40
Cement manufacture 4, 111
Centerline average roughness 9, 138
Central processing system 10, 151
Centrifuge 2, 129, 5, 28, 38, 10, 50
Ceramic radwastes 2, 64
Ceramics 2, 117, 9, 29, 51
Ceroplastics 2, 117
Cerebral push-ups 10, 220
Cerium oxide 9, 30
Char 10, 183
Charge accumulation 2, 105, 8, 48
Chaustint 6, 197
Chemical analysis 7, 86
Chemical converter 10, 29
Chemical deposition 2, 135, 12, 25
Chemical energy 12, 46
Chemical exposure 12, 90
Chemical fires 6, 111
Chemical heat pump 10, 35
Chemical immersion technique 2, 64
Chemical industry 6, 53
Chemical inertness 7, 103
Chemical processes 7, 64, 10, 68
China 1, 44, 3, 9, 32, 179, 5, 138, 6, 44, 8, 149
Chloride electrolysis process 10, 73
Chlorine compounds 5, 36
Chromaticity 8, 68
Chromatography 2, 00, 4, 17, 5, 72, 7, 143, 8, C6, 9, 39, 142, 10, 160, C6, 12, 58
Circle of Fire 3, 34
Circuit patterns 5, 45, 11, 141
Civil litigation 3, 85
Clay barrier 8, 68
Climate 2, 11, 5, 36, 9, 80
Coincidence analyses 10, 146, 12, 82
Closed universe 6, 52
Cloud seeding 11, 56
Coal 4, 111, 6, 44, 7, 66, 10, 42
Coal gasification 1, 88, 3, 46, 10, 109, 12, 46, 90
Coal-generated power 9, 215, 12, 35
Coal liquefaction 4, 74, 11, 90

Coal resources 7, 66, 9, 68
Coatings 2, 39, 135, 1, 135, 143
Cobalt 9, 83
Code of ethics 2, 17
Cogeneration 5, 28
Collector efficiency 7, 41
Colliding beams 2, 194, 5, 116, 10, 41
Collimating slits 9, 146
Collision-avoidance systems 2, 68, 12, 25
Color capability 10, 155, 6, 80, 198, 7, 3, 8, 3, 68, 12, 38
Colorimetry 9, 134
Column efficiency 3, C3, 9, 142, C1
Column packings 2, 112, C1
Combustion chamber 4, 82, 10, 35
Combustion research 2, 129, 7, 33, 50, 10, 47, 11, 3, 116, 121
Comets 7, 144, 12, 56
Command module 10, 29
Commercial aircraft 4, 88, 137
Commercial development 4, 103, 11, 196
Common sense 3, 97
Communications 4, 25, 49, 119, 5, 108, 6, 75, 7, 11, 144, 8, 23, 62, 9, 88
Communications satellites 4, 80, 3, 153
Compensation 9, 7, 142
Competition 5, 51, 10, 230, 11, 17, 12, 19
Compliant Copper Cooled Darlington 10, 97
Composites 10, 54, 62
Compound lens 12, 68
Compressed air 10, 17
Compressed natural gas 9, 70
Compression ratios 4, 80, 10, 167
Computational capability 4, 111, 5, 143, 10, 157
Computer science 1, 21, 127, 2, 48, 4, 31, 42, 5, 27, 198, 200, 6, 80, 117, 7, 70, 8, 117, 10, 94, 151, 152, 156, 157, 183, 12, 25, 58
Comsats 9, 90
Concentration-absorption relationships 7, 86
Concentration-difference energy 2, 52
Conductive structural fabrics 10, 126
Conference TV 12, 135
Confident thinking 11, 11, 192
Conflict of interest 6, 84, 11, 17
Congressional committees 1, 33, 12, 90
Consonants 5, 104
Construction industry 3, 131, 5, 108
Contamination 8, 84, 10, 160, 167
Continental growth 4, C14
Continuously variable-ratio transmission (CVT) 6, 3, 117
Contracts 11, 90
Control systems 5, 36, 8, 75, 9, 129
Convective zone 9, 87
Coolant 4, 32
Cooling system 8, 84, 10, 35
Cooperation 8, 154, 10, 230, 11, 90
Copper particles 12, 290
Core material/process 10, 90
Coronas 9, 84
Corporations 3, 97, 5, 138, 6, 27, 9, 108, 114
Correspondent 9, 52
Corrosion 4, 60, 7, 107, 10, 42, 90, 12, 90
Cosmic rays 3, 21, 5, 116, 6, 92, 8, 10
Cosmic telescopes 10, 58, 11, 127, 12, 56
Cosmos 3, 182, 4, 32, 10, 11, 12, 56
Cotton growing 5, 38
Coulter counter 2, 129, 9, 146
Coupling agents 8, 94
Crankshaft pattern 12, 25
Creativity 2, 23, 4, 42, 5, 108, 11, 17
Crime laboratory 3, 85, 109
Crop management 6, 192, 7, 121, 9, 90
Cross drafts 6, 129
Cross-talk 12, 68
CRT copiers 10, 155
Cruise camber control 4, 88
Crucifixion 12, 74
Crustal movements 11, 31
Cryocollator 1, 50, C1
Cryogenic flaming point reduction 7, 143
Cryogenic insulation 2, 151, 9, 39, 11, 31
Cryogenics 1, 50, 55, C1, 3, 28, 9, 52, 64
Cryolite 11, 135
Cryosorption pumps 8, 84
Crystal growth 1, 107
Crystalline radwastes 2, 64
Cube corner 8, 68
Cultural amenities 5, 138, 11, 17
Curie point 8, 64
Customer complaints 9, 114
Cyanoacrylate 8, 94
Cyclic chemical reactions 9, 30
Cyclotron 4, 57
Cylindrically-coordinated motion 6, 139

- D -

Damaged aircraft 5, 27
Dam-Atoil 7, 49
Dark-field microscopy 2, 129, 3, 91
Data acquisition 5, 116
Data loggers 5, 123
Dead Sea 11, 41

Index to Volume 21 (1979) of IR/D

Bold type refers to issue numbers in Vol. 21 of Industrial Research/Development. Light numerals indicate page numbers.

- A -

Abrasion resistance 6, 143, 7, 107, 12, 25
Absolute zero 11, 51
Absorption chillers 5, 35
Absorption coefficients 2, 47, 6, 67
Absorption spectrometry 2, 47, 9, 92, 10, 146
Absorption trapping 9, 61
Academic R & D 1, 34, 11, 31, 32
Accelerated depreciation 11, 110
Accelerating rate calorimeter 10, 141
Accelerator 5, 116, 9, 52
Accelerometers 10, 42
Accurate measurements 7, 11, 99, 8, 75, 9, 129, 10, 225
Achema 12, 37
Acidity sensor 10, 42
Acid rain 10, 42
Acoustic characteristics 5, 104
Acoustic signal 7, 92, 9, 94, 10, 125
Acrylic plastic 11, 196
Active nuclei 2, 88
Active Stimulation of the Auroral Plasma (ASAP) 9, 88
Adhesion 6, 135, 143, 8, 94, 10, 230, 11, 198
Adsorbent phase 2, 112, C16, 3, C3
Aerial spraying 7, 121
Aerodynamic drag 2, 70, 6, 117, 9, 30, 10, 54, 11, 41
Aerodynamic forces 5, 133
Aerodynamic heating 4, 31
Aerodynamic moment 1, 60
Aeronautical R&D 6, 92
Aeronic farming 3, 28
Aerosol 2, 129, 6, 74
Aerospace technology 1, 127, 2, 48, 151, 7, 50, 151, 11, 74
Aftershock 10, 42
Agricultural technology 2, 48, 5, 38, 108
Agricultural wastes 1, 27
Airborne data collection 4, 137
Air bubble 9, 134
Air compressors 8, 84
Air conditioning system 6, 129, 10, 43
Aircraft compressor link 10, 118
Aircraft engines 5, 28, 12, 36
Aircraft survivability 5, 27
Aircraft design 4, 88, 11, 135
Air currents 9, 129
Air-drag reductions 1, 127
Air exchange 10, 36
Air movement 6, 43
Airplane hanger 3, 22
Airplane-helicopter 1, 127
Air pollution 3, 48, 4, 41, C7, 10, 42, 11, 56, 12, 21, 46
Air segmentation 9, 134
Air-supported dome 3, 131
Albatross 5, 27
Alcohol 3, 62, 9, 30
Alienation 9, 114
All-angle miller 1, 21
Alloys 9, 83, 11, 135
Alloys 9, 83, 11, 135
Alumivum 10, 42
Alternate energy technology 1, 34, 2, 49, 60, 7, 76, 12, 65
Aluminum flakes 7, 103
Aluminum refining 10, 3, 11, 135
Aluminum foil embossed roofing 10, 43
Amalgamation 9, 124
Amalthea 5, 47
American Crystal Sugar Research Center Research Lab 5, 3, 108
American institutions 9, 114
American Vacuum Society 8, 107, 12, 99
Amino acids 9, 42
Ammonia 3, 70
Amplitude objects 3, 91
Anabasis 10, 11
Anaerobic adhesives 8, 94
Anaerobic decomposition 12, 66
Analog multimeters 8, 90
Analog servo systems 10, 163
Anal og signal record problems 10, 152
Analytical chemistry 3, 103
Analytical commentary 2, 17
Analytical instruments 2, 3, 96, 100, 10, 82, 12, 29
Analytical mass spectrometer 10, 82
Anemometer 6, 183
Angular scattering photometer 2, 129
Annealing 9, 40, 11, 141
Anodic stripping voltammetry 9, 124
Antarctic research 11, 56
Antenna phenomena 7, 103, 9, 96, 11, 50
Antibacterial coatings 8, 48
Anti-log coating 10, 183
Antimatter 2, 194, 7, 84, 12, 56
Antistatic coatings 8, 48, 11, 196
Antisubmarine warfare 6, 43
Anti-technology prejudice 5, 27
Antitumor agents 5, 15
Apparent value determinations 7, 97, 8, 75, 9, 129
Appearance 8, 69
Applied research 3, 22, 4, 103, 7, 92, 11, 54, 90, 98

Arc furnaces 7, 49, 10, 73
Archaeological problems 4, 57
Architectural 5, 3, 108
Arc resistance 2, 117
Arc spray gun 4, 119
Argon-36 2, 85, 3, 69
Argonne National Laboratory 10, 110
Ariane launch vehicle 4, 90
Armak Co. 10, 130
Axial-flow turbines 1, 27
Army Satellite Communications 10, 102
Agency 10, 102
Aromatic-heterocyclic polymers 11, 198
Array processors 10, 157
Arsenic 5, 15
Arsenite ions 4, 17
Arteriosclerosis 4, 169
Artificial harbors 7, 149
Aspherical lenses 11, 32
Aspiration 9, 134
Assessing R & D projects 1, 100
Asteroids 11, 189
Astromast 3, 131
Astronauts 9, 183
Astronomers 2, 194, 7, 81
Astrophysical phenomena 6, 92, 11, 50
Atlas booster 6, 35
Atmospheric pressure 10, 167
Atmospheric processes 6, 111, 7, 64, 8, 45, 9, 29
Atoll 7, 49
Atomic absorption spectrophotometer 10, 82
Atomic arrangement 11, 112
Atomic energy 5, 90, 8, 38, 11, 138
Atomic planes 6, 35
Atomic relaxations 9, 218
Atomic vapor quantum counter 7, 50
Attenuation 7, 103, 8, C1, 12, 68
Attractiveness 1, 107
Auger electron spectroscopy 1, 107
Auroral return current 9, 88
Automated equipment 6, 139, 8, 62, 10, 152
Automated injector 9, 134
Automatic samplers 7, 86, 9, 134
Automatic shut-down process 5, 54
Automatic Station-Keeping system 9, 94
Automatic tuning 2, 47
Automobile industry 6, 117, 9, 29, 11, 23, 12, 25, 65
Automotive propulsion systems 6, 117
Auxiliary electric power 5, 28
Auxiliary pump 10, 167
AVS Standards 12, 99

- B -

Bachelor women 8, 153, 9, 215
Background spectrum 1, 80, 3, C3, C6
Backscatter peak 6, 105, 123, 11, 121
Backstreaming 8, 84, 10, 167
Bacterium 5, 89, 6, 83, 12, 74
Balance of payments 4, 48
Ballons 6, 43
Barnacle adhesive 8, 94
Basic research 1, 77, 3, 32, 67, 4, 103, 10, 146, 11, 54
Bathymetric instrument 6, 43
Battery R & D 1, 64, 127, 3, 22, 5, 56, 9, 30, 10, 35, 183, 12, 38
Bauxite 11, 135
Beach erosion 5, 28
Beam deflection 4, 209
Beam director 7, 86
Beam optics 7, 80, 9, 146
Bell curve 8, 75
Benthic phenomena 4, 17
Bezoar 12, 56
Big bang 2, C1
Bimodal SEC 1, 51
Binary stars 10, 89
Bioanalytical research kit 5, 36
Biological hazards 2, C16, 12, 51
Biological research 3, 22
Biological wind prospecting 1, 28, 88
Biomass conversion plants 2, 60, 5, 28, 4, 169
Biomedical electrodes 8, 62
Bionic ear 8, 43
BIRD Foundation 3, 91, 12, 82
Birth control 12, 135
Blackbody thermal radiation 10, 225
Black hole 2, 88, 8, 44, 12, 54
Blackouts 3, 48
Blood-analysis 5, 166, C1
Blower 6, 129
Boiler tube 12, 90
Bolt tightening and loosening 6, 139
Booster system 9, 52
Boranes 12, 51
Boron 2, 49
Boron carbide 4, 131
Boron nitride 6, 143
Boson 10, 41, 12, 51
Boundary layer acoustic monitor 4, 31
Braking power 5, 200
Braking 1, 127, 2, 70, 117, 7, 55, 10, 62
Brand identification 12, 19
Breadwinner 9, 215, 11, 200

Breath test 9, 30
Breeder reactor 1, 22, 3, 22, 4, 131, 5, 97, 7, 144, 11, 137
Brightfield illumination 3, 90
Broadcast satellites 3, 91
Broad line gamma ray spectrometer 1, 38
Broadcast satellite service 11, 64
Brushite 4, 17
BTU accounting 7, 33
Bubble memory 5, 45, 6, 36, 11, 32
Budget FY 1980 1, 77, 3, 32
Buffer jacket 12, 68
Buffer storage element 10, 152
Bulk conductivity 7, 103
Bullet comparison 3, 85
Bunker fuel 4, 82
Burning rates 3, 115
Burst pressure 10, 102
Bus bars 7, 55, 10, 62
Buses 4, 25, 74, 103
Business administration 5, 27, 9, 114, 11, 11
Business computer system 10, 94
Buying power 3, 77, 11, 192
By-products 8, 38

- C -

Cabot Corp. 10, 122
Cadmium sulfide copper sulfide 3, 40
Calaveras Fault 10, 42
Calcium phosphate 4, 17
Calculators 8, 75, 10, 15
Calibration parameters 2, 105, C1, 5, 129, 12, 99
Callisto 5, 47
Calorimeter 5, 116
Cancer 5, 15, 90, 165, 84, 12, 82
Capacitance transducers 10, 160
Capacitors 2, 11, 53
Capillary columns 3, C3, 9, 142, C1, 10, C12
Capital expenditures 1, 77, 100, 103, 11, 98
Carbide production 2, 122
Carbon dating 4, 57, 12, 74
Carbon dioxide 7, 66, 10, 29, 11, 31, 53
Carbon monoxide 2, 122
Carbon particles 7, 33
Carbothermic reduction 2, 122
Carburetor systems 4, 80, 11, 121
Cardiac pacemaker batteries 10, 35
Cardiovascular disease 5, 15
Cartooning 11, 82
Casein 6, 73
Casagrain reflecting mirrors 7, 81
Castings 5, 28
Catalytic agents 7, 92, 11, 42
Catalytic gas electrode 11, 31
Catecholamines 7, C1
CAT scanning 12, 51
Cave 9, 68
Cavitation 12, 90
Cavitons 9, 88
Celestial mechanics 2, 194, 10, 58
Cell efficiency 3, 40
Cement manufacture 4, 111
Centerline average roughness 9, 138
Central processing system 10, 151
Centrifuge 2, 129, 5, 28, 38, 10, 50
Ceramic radwastes 2, 64
Ceramics 2, 117, 9, 29, 51
Ceroplastics 2, 117
Cerebral push-ups 10, 220
Cerium oxide 9, 30
Char 10, 183
Charge accumulation 2, 105, 8, 48
Chauntist 6, 197
Chemical analysis 7, 86
Chemical converter 10, 29
Chemical deposition 2, 135, 12, 25
Chemical energy 12, 46
Chemical exposure 12, 90
Chemical fires 6, 111
Chemical heat pump 10, 35
Chemical immersion technique 2, 64
Chemical industry 6, 53
Chemical inertness 7, 103
Chemical processes 7, 64, 10, 68
China 1, 44, 3, 9, 32, 179, 5, 138, 6, 44, 8, 149
Chloride electrolysis process 10, 73
Chlorine compounds 5, 36
Chromaticity 8, 68
Chromatography 2, 00, 4, 17, 5, 72, 7, 143, 8, C6, 9, 39, 142, 10, 160, C6, 12, 58
Circle of Fire 3, 34
Circuit patterns 5, 45, 11, 141
Civil litigation 3, 85
Clay barrier 8, 68
Climate 2, 11, 5, 36, 9, 80
Coinical analyses 10, 146, 12, 82
Closed universe 6, 52
Cloud seeding 11, 56
Coal 4, 111, 6, 44, 7, 66, 10, 42
Coal gasification 1, 88, 3, 46, 10, 109, 12, 46, 90
Coal-generated power 9, 215, 12, 35
Coal liquefaction 4, 74, 11, 90

Coal resources 7, 66, 9, 68
Coatings 2, 39, 135, 1, 135, 143
Cobalt 9, 83
Code of ethics 2, 17
Cogeneration 5, 28
Collector efficiency 7, 41
Colliding beams 2, 194, 5, 116, 10, 41
Collimating slits 9, 146
Collision-avoidance systems 2, 68, 12, 25
Color capability 10, 155, 6, 80, 198, 7, 3, 8, 3, 68, 12, 38
Colorimetry 9, 134
Column efficiency 3, C3, 9, 142, C1
Column packings 2, 112, C1
Combustion chamber 4, 82, 10, 35
Combustion research 2, 129, 7, 33, 50, 10, 47, 11, 3, 116, 121
Comets 7, 144, 12, 56
Command module 10, 29
Commercial aircraft 4, 88, 137
Commercial development 4, 103, 11, 196
Common sense 3, 97
Communications 4, 25, 49, 119, 5, 108, 6, 75, 7, 11, 144, 8, 23, 62, 9, 88
Communications satellites 4, 80, 35, 153
Compensation 9, 7, 142
Competition 5, 51, 10, 230, 11, 17, 12, 19
Compliant Copper Cooled Darlington 10, 97
Composites 10, 54, 62
Compound lens 12, 68
Compressed air 10, 17
Compressed natural gas 9, 70
Compression ratios 4, 80, 10, 167
Computational capability 4, 111, 5, 143, 10, 157
Computer science 1, 21, 127, 2, 48, 4, 31, 42, 5, 27, 198, 200, 6, 80, 117, 7, 70, 8, 117, 10, 94, 151, 152, 156, 157, 183, 12, 25, 58
Comsats 9, 90
Concentration-absorption relationships 7, 86
Concentration-difference energy 2, 52
Conductive structural fabrics 10, 126
Conference TV 12, 135
Confident thinking 11, 11, 192
Conflict of interest 6, 84, 11, 17
Congressional committees 1, 33, 12, 90
Consonants 5, 104
Construction industry 3, 131, 5, 108
Contamination 8, 84, 10, 160, 167
Continental growth 4, C14
Continuously variable-ratio transmission (CVT) 6, 3, 117
Contracts 11, 90
Control systems 5, 36, 8, 75, 9, 129
Convective zone 9, 87
Coolant 4, 32
Cooling system 8, 84, 10, 35
Cooperation 8, 154, 10, 230, 11, 90
Copper particles 12, 290
Core material/process 10, 90
Coronas 9, 84
Corporations 3, 97, 5, 138, 6, 27, 9, 108, 114
Correspondent 9, 52
Corrosion 4, 60, 7, 107, 10, 42, 90, 12, 90
Cosmic rays 3, 21, 5, 116, 6, 92, 8, 10
Cosmic telescopes 10, 58, 11, 127, 12, 56
Cosmos 3, 182, 4, 32, 10, 11, 12, 56
Cotton growing 5, 38
Coulter counter 2, 129, 9, 146
Coupling agents 8, 94
Crankshaft pattern 12, 25
Creativity 2, 23, 4, 42, 5, 108, 11, 17
Crime laboratory 3, 85, 109
Crop management 6, 192, 7, 121, 9, 90
Cross drafts 6, 129
Cross-talk 12, 68
CRT copiers 10, 155
Cruise camber control 4, 88
Crucifixion 12, 74
Crustal movements 11, 31
Cryocollator 1, 50, C1
Cryogenic flaming point reduction 7, 143
Cryogenic insulation 2, 151, 9, 39, 11, 31
Cryogenics 1, 50, 55, C1, 3, 28, 9, 52, 64
Cryolite 11, 135
Cryosorption pumps 8, 84
Crystal growth 1, 107
Crystalline radwastes 2, 64
Cube corner 8, 68
Cultural amenities 5, 138, 11, 17
Curie point 8, 64
Customer complaints 9, 114
Cyanoacrylate 8, 94
Cyclic chemical reactions 9, 30
Cyclotron 4, 57
Cylindrically-coordinated motion 6, 139

- D -

Damaged aircraft 5, 27
Dam-Atoil 7, 49
Dark-field microscopy 2, 129, 3, 91
Data acquisition 5, 116
Data loggers 5, 123
Dead Sea 11, 41

Debye length 1, 107
Deceleration 6, 117
Decision nodes 4, 103
Deep ocean sampler 10, 125
Deep-sea communities 9, 76
Deep space probe 10, 58
Defense R&D 11, 54
Defense Communication Engineering Center 10, 102
Defoliation programs 4, C11
Deformation-aging technique 4, 82
Delaney Clause 4, 200
Delivery schedules 11, 74
Delta roof 12, 107
Demersalizing seawater 4, 32
Denitrification 3, 62
Dental cements 8, 94
Dental prosthesis 5, 38; 7, 144
Dept. of Energy 10, 90
Depreciation 1, 100
Depth-profile absorption analysis 7, 92
Desalination 6, 69; 7, 49
Desk top computer 6, 117
Destructive insects 7, 121
Detection limits 4, C7; 8, 82
Detector for liquid chromatography 10, 93
Detector performance 1, C6; 3, C6; C1
Deuterium-tritium (D-T) fuel 2, 49
Devastation 10, 42
Developing countries 5, 35; 74, 11, 102
Development expense 1, 100
Devonian shale 5, 59
Diagnostic facility 3, 109; 5, 116; 6, 58
Diamond 9, 138
Dichroic mirrors 12, 82
Dielectric strengths 2, 117; 9, 64
Diesel engine 11, 121
Diester fluid seal 3, 115
Differential-absorption lidar 7, 50
Differential interference contrast 3, 91
Diffraction pattern 11, 112, 121
Diffuse light 5, 84; 10, 146
Diffusion cloud chamber 7, 64
Diffusion pumps 8, 84; 10, 167
Digital ammeter 10, 113
Digital clock 6, 117
Digital Equipment Corp. 10, 94
Digital frequency meters 10, 151
Digital multimeters 8, 90; 10, 151
Digital sequencer 9, 146
Digital TV camera 3, 109
Digital voltmeter 6, 117
Dimensional tolerances 7, 99
Dimethylamino group 2, 29
Diode array 7, 86
Diode laser 2, 29; 44
Dipole moment 4, 88
Direct lift feature 8, 48
Disc centrifuges 9, 146
Disc memories 5, 133
Discrete speed transmissions 6, 117
Discrimination 4, 98; 35, 6, 68
Disinfectants 5, 165; 6, 38
Displacement sensing 11, 42
Disposable probe 12, 82
Dissipation factor 2, 117
Distributor 7, 33
Distrust 9, 114
Diurnal period 8, 17; 10, 225
Documentation 3, 97; 12, 90
Domestic policy 4, 31
Doping 1, 107; 5, 129; 6, 69; 7, 92; 11, 141
Doppler effect 5, 49; 6, 51; 7, 50; 8, 17; 9, 29
Doppler vibrometry 5, 133
Double-pulsed hologram 5, 133
Doublet III research device 10, 29
Dow Chemical Co. 10, 141
Dow Corning Corp. 10, 130
Drainage patterns 8, 117
Drift chambers 5, 116
Drifting circular eddies 6, 143
Drill bit 10, 118
Driving-point transfer function 4, 123
Drivelines 6, 3, 117
Drive motor system 10, 50
Drizzle 6, 74
Drug screening 3, C3
Dual-capillary column 9, 142
Dual monitoring 10, C6
Dual wavelength pyrometer 10, 141
Dummy ties 5, 48
Du Pont, E. I., de Nemours & Co. 10, 141
Dust particles 11, 31
Dye laser 11, 116
Dynamic mass creation theory 4, 32
Dynamic positioning (DP) system 9, 94
Dynamic pressures 8, 6
Dynamic structural analysis 4, 123
Dynamic tightness 10, 167

E

Earth-based telescopes 7, 81
Earthquake prediction 2, 48; 5, 38; 54, 7, 6; 9, 68; 10, 42; 11, 31, 42
Earth resource satellites 2, 29
Earth sciences 2, 48
Earth's crust 5, 15; 9, 58; 11, 31
Earth's rotation 3, 180
EBR-1 facility 11, 138
Echelle grating 3, 109
Echo-cardioscope 4, 169
Ecliptic 10, 58; 11, 49
Ecology 8, 155

Economic factors 4, 74; 6, 44; 139
Econometric models 9, 55; 11, 11, 192
Eddy current effects 4, 131; 5, 129; 12, 82
Education 2, 48; 4, 25; 5, 11; 12, 135
Efficient technology 6, 53
Einstein centennial 2, 49
Electric car 1, 127; 10, 62
Electric current 7, 49; 10, 29
Electric fields 8, 80; 9, 88; 11, 51
Electric impulses 8, 62
Electric motor 11, 80
Electric utilities 2, 29; 4, 32
Electrical conductivity 2, 30; 5, 62; 6, 43
Electrical energy 4, 32; 5, 35; 10, 29, 47
Electrical equipment 12, 82
Electrical insulation 2, 117
Electrical isolation 21, 12, 82
Electrically-driven tractor 5, 28
Electricity 3, 40, 48, 180; 4, 131; 5, 97; 6, 44; 7, 25; 10, 47; 11, 138
Electrocardiogram 4, 169
Electrochemical detector 1, C6; 2, 105
Electrochemists 11, 135
Electrochromic materials 12, 37
Electrodeposition 2, 135; 10, 121
ElectroGasDynamics Inc. 10, 97
Electro-hydraulic servosystem 2, 70
Electroless deposition 2, 135; 9, 40
Electromagnetic energy 5, 116; 6, 64; 10, 41; 12, 42
Electromagnetic field 1, 22; 12, 82
Electromagnetic interference (EMI) 7, 103; 12, 68
Electromagnetic lenses 6, 99
Electromagnetic radiation 1, 38, 52
Electrometers 2, 88; 4, 119; 7, 103; 9, 90; 11, 164
Electron beam heating 8, 90; 10, 138
Electron beam lithography 1, 66
Electron-beam particulate analysis 6, 105
Electron capture detector 4, C7; 9, C1
Electron-capturing species 9, C1
Electron-grade gases 12, 40
Electronic instrumentation 8, 90; 11, 121
Electronic precision balance 10, 113
Electronic Relays Inc. 10, 98
Electronic telecommunication 5, 198
Electronics 2, 39; 3, 22; 4, 86; 7, 10
Electron microscopy 4, 145; 6, 83; 10, 5
Electro-optical interface circuitry 9, 146; 12, 74
Electron plasma waves 9, 116
Electron-positron collisions 5, 88
Electron-probe micro-analysis 8, 94
Electron transport 1, 107; 4, 60
Electrophoresis 2, 96
Electrolag process 2, 135
Electrostatic paint spray gun 10, 97
Elemental analysis 4, 111; 11, 121
Elementary particles 2, 129
Elemental phase identification 11, 112
ELF radiation 9, 88
Emerging technologies 4, 62
EMI Ltd. 10, 110
EMI shielding 7, 103
Emission lines 6, 51
Emissions 3, 28, 48; 4, 145; 5, 117; 12, 82; 90
Emissivity levels 9, 40; 12, 82
Emphysema 5, 165
Employee stability 3, 77
Employment 3, 21
Endurance record 1, 38
Energetic object 6, 52
Energy 1, 3, 33; 2, 48; 6, 74; 88, 155; 7, 49; 10, 29
Energy balance 6, 117
Energy consumption 1, 87; 2, 29; 5, 108
Energy-dispersive x-ray fluorescence 5, 59; 117; 7, 66; 9, 29; 56, 213; 11, 80
Energy levels 4, 111; 6, 105; 12, 82
Energy production 1, 27; 2, 88; 4, 74; 51, 76; 6, 92; 8, 50; 9, 70; 12, 25, 66
Energy R&D 1, 27; 87; 3, 33; 34, 40; 44, 46; 4, 74; 11, 89; 90
Energy resources 1, 87; 4, 77
Energy-saver solid-state relay 10, 98
Energy spectrum 4, 111
Energy storage systems 4, 60
Engine management 6, 117; 8, 60
Engineering effectiveness 9, 108
Engineering plastics 1, 22
Engineering talent 5, 28; 11, 17
Engineer/Scientist Demand Index 3, 21
English-language programming 5, 123
Enrichment of uranium 3, 64; 8, 60; 10, 50
Entrepreneur 1, 93; 11, 106
Environmental management 4, 74; 5, 51; 6, 92; 155; 8, 37; 9, 30; 114, 124, 129, C1
Enzyme reagent chemistry 1, 22
Epitaxial recrystallization 11, 141
Epoxy and polymer coatings 10, 46
Equal rights 4, 11; 5, 11; 6, 197; 7, 142; 8, 154; 9, 215

Equipment manufacturers 2, 48
Equity 10, 230
Equivalent spherical diameter 9, 146
Errors 4, 206; 8, 75
Ethylene 4, C7
Europa 3, 70; 5, 47; 9, 101
Europium 5, 45; 6, 36; 12, 82
Eutectic salts 2, 62
Evacuated tube transportation 4, 209
Exercise devices 10, 183
Excitation frequency 4, 123
Excitation wavelength 7, C1
Expendable temp and velocity profiler (XTVP) 6, 43
Experience 3, 77; 5, 11
Exploration 7, 17
Expochem '79 12, 58
Exposure standards 5, 90
External mass storage 3, 109
Extranuclear Laboratories Inc. 10, 82, 85
Extraterrestrial communication 12, 13
Fabrication process for fuel 10, 134
Fabric roofs 3, 131
Failure analysis 12, 92
Family 8, 153; 9, 215; 12, 136
Fast breeder 1, 21; 2, 54; 4, 131; 11, 138
Fast flux 3, 22; 4, 131
Feasibility and cost benefits 3, 103
Federal funding 2, 76; 11, 90; 11, 32; 12, 65
Federal guidelines 2, C16; 4, 31; 12, 9, 62
Fame cladding 9, 96
Ferroelectric ceramic 9, 191
Ferrofluids 3, 115; 9, 56
Ferroferric material 6, 64; 9, 85
Fiberglass mesh 12, 25
Fiber optics 1, 27; 6, 36; 10, 155; 12, 68, 82
Fiberoptic data link 10, 125
Fibronic Ltd. 10, 125
Field effect transistor 6, 198
Field-ion microscope (FIM) 6, 198
Field service 12, 99
Field-terminable optical connectors 12, 68
Financial control 1, 33
Financial incentives 5, 28; 11, 90
Fire-barrier sheet 10, 126
Firefighting materials 1, 27
Fire protection 2, 66
Fire-resistant diesel fuel 10, 90
Fiscal constraints 11, 74
Fishing industry 6, 43
Fishing net 4, 89
Fission power systems 2, 54; 4, 131
Flame ionization detector 6, C1; 9, C1
Flame photometers 9, 134
Flame-spraying technique 4, 119
Flame turbulence 11, 116
Flammable material 7, 143; 10, 47
Flexible elastomer 10, 129
Flight damage 5, 27
Flight profile data 4, 137
Flight-qualified equipment 4, 42
Floating-point calculations 10, 157
Flow injection analysis 9, 134; 10, 82
Flow-monitoring instrumentation 4, 31
Flow velocity 9, 134
Fluorescence 5, 84; 7, 86; 92, C1; 12, 82
Fluorescence microscopy 3, 91
Fluorescent lamps 1, 3
Fluorescent radiation 8, 42
Fluorimeters 9, 134
Fluid flow 3, 66
Fluidized bed combustion 1, 88; 4, 74
Fluorocarbons 5, 36
Fly ash 9, 30
Flying head disc memory 5, 133
Flywheels 4, 209; 6, 117; 10, 62; 11, 89
Foil air bearing 6, 135
Food resources 1, 75; 7, 121; 9, 76
Forcing functions 4, 123
Foreign patent laws 9, 108
Foreign Trade Corporations 5, 138
Forensics 3, 85; 4, 145; 10, 220; 12, 74; 90
Forepump 10, 167
Foreshocks 10, 42
Formaldehyde 10, 73
Fossil fuel 1, 87; 6, 53; 88; 8, 80; 12, 38
Fourier-transform infrared spectroscopy 1, 80; 12, 58
Free enterprise system 5, 200
Frequency-response function 4, 123
Fresh water 3, 117
Fresnel reflections 12, 68
Fuel 3, 33, 48; 10, 47; 11, 121
Fuel cells 1, 88; 6, 44; 11, 42
Fuel consumption 4, 88; 6, 35; 117; 7, 33; 11, 23, 32; 41; 12, 25
Fuel costs 4, 77; 10, 62
Fuel efficiency 5, 28; 7, 121
Fuel fabrication 8, 62
Fuel reprocessing 5, 97
Fuel solidification 7, 143
Fume hood 6, 129
Fusion energy 2, 40; 3, 44; 4, 32; 47; 6, 88; 8, 31; 10, 29

G

Gadolinium 4, 131; 5, 45; 6, 64

Gaede-Langmuir award 8, 107
Galactic nuclei 11, 50
Galapagos Spreading Center 9, 76
Galaxy 5, 36; 7, 81; 8, 44; 12, 54
Galileo spacecraft 10, 58
Gallium arsenide 12, 82
Gamma rays 4, 131
Ganymede 3, 70
Garbage 10, 47
Garnet 5, 45
Gas centrifuge plant 10, 50
Gas chromatography 2, 85; 96, 100; 3, C3; 4, C7; 5, C4; 6, C1; 9, 148; C1; 10, C6
Gas chromatography/infrared 1, 50; C1
Gas chromatography/liquid chromatography 5, 72
Gas chromatography/mass spectrometers 1, 50; C1; 3, C3; 4, 48
Gas clouds 9, 42
Gas turbine 1, 127; 2, 151; 3, 46; 5, 62; 11, 118
Gasification 9, 40; 12, 46
Gaseous corona 9, 84
Gel permeation chromatography 2, 112
Gems 10, 146
General Electric Co. 9, 11; 10, 78; 90, 97; 98, 101; 109
Generalist 1, 93
Generating station 11, 32
Geophysical exploration instrument 10, 102
Geothermal energy 1, 64; 3, 34; 9, 29; 11, 195; 196; 12, 37
Get it right 7, 11
Getting pumps 8, 84
Glacier ice 8, 117; 11, 127
Glasses 2, 30; 117; 3, 21; 4, 52
Glass insulated microwave 1, 70
Global weather experiment 2, 30
Globular clusters 9, 42
Gloss 7, 107; 8, 68
Glucose 7, 84; 10, 41; 12, 42
Glutamic acid 2, 29
Golden Fleece Awards 4, 99
Golden Omega Award 5, 36
Goodyear Tire & Rubber Co. 10, 129
Goniophotometer 8, 68
Gossamer Albatross and Condor 5, 27
Gould Inc. 10, 118; 122
Government regulations 6, 117; 7, 168
Government R&D salaries 9, 108; 114, 124; 11, 90; 135; 12, 62
Gradient elution chromatogram 7, C1
Grain structures 1, 22
Graphics printers 10, 153; 155, 160
Graphite-epoxy systems 10, 54
Grate electric process 4, 32
Gravitational collapse 6, 52; 9, 87
Gravitational constant 4, 32
Gravitational deflector 9, 44
Gravity 2, 129; 6, 155; 8, 44; 9, 218; 11, 135
Gravitational lens 8, 44
Gravity dampers 6, 129
Gravity waves 2, 83; 6, 36
Great Red Spot 3, 70; 5, 47
Greenhouse effect 4, C7; 9, 218; 10, 225
Gross national product 2, 151; 7, 33; 11, 89
Groundwater 8, 68; 11, 42
Guayule 8, 31
Gulf Stream 3, 33; 6, 38
Gust alleviation 4, 88
Gyroscopic forces 5, 28

H

Hadron 5, 116
Halo 9, 84
Handwriting examinations 3, 85
Hang glider 10, 123
Hard-facing alloy 10, 88
Hardness 6, 135; 143; 7, 107
Hazards 7, 141; 9, 114; 121; 10, 227; 11, 56
Hazemeters 8, 68
Heads of households 8, 153
Health 4, 169; 6, 74; 7, 57; 9, 124
HEAO-2 satellite 6, 52
Heart disease 4, 69
Heartline 8, 31
Heat capacity 6, 67
Heat energy 7, 33; 10, 29
Heat exchanger 3, 34; 9, 56; 72
Heat flow 3, 69; 10, 725
Heat of fusion 2, 62
Heat generation 3, 66; 12, 36
Heat pipe 11, 116
Heat pump 4, 77; 6, 64; 9, 40; 10, 43
Heat stack 9, 68
Heat transfer 1, 162; 8, 44; 11, 138
Heavy ion acceleration 2, 29; 6, 31; 9, 52
Heavy metal 6, 73; 9, 124
Heliostat mirrors 2, 30; 12, 35
Helium 1, 58; 2, 49; 11, 51
Heterodyne holographic interferometry 5, 133
Hevea natural 8, 31
Hewlett-Packard Corp. 10, 94; 102
Hexcel Corp. 10, 126
High energy electron diffraction 1, 107
High-energy electrons 5, 116; 9, 39
High energy gamma ray detector 1, 38
High energy neutrons 4, 47
High-energy physics 2, 29; 48; 5, 116; 12, 42
High frequency 2, 47; 7, 33; 9, 88
High-performance functional liquids 10, 90

Light emitting diodes 12, 37
Light gate arrays 9, 51
Light pen system 10, 114
Lighting 3, 69
Lignite 2, 60
Linear accelerator 209
Liquifaction 1, 88
Liquid chromatography 1, C6, 3, 103
C3, 4, C1, 8, C1, 9, 146, 10, 85
Liquid crystals 12, 12, 37, 82
Liquid hydrogen fuel 12, 36
Liquid phase epitaxy 11, 141
Liquid sample processor 10, 141
Liquid solar cells 11, 72
Lithium 2, 49, 4, 32
Lithium-drifted silicon detector 6, 123
Lithosphere 6, 111
Load-leveling 5, 86, 11, 89
Lock-in amplifiers 8, 90
Logic circuits 1, 56, 7, 70
Longevity 4, 98
Long-haul tractor-trailers 11, 41
Long Pulse Laser (LPL) 5, 56
Long-term project funding 5, 27, 11, 74
Low-heat-value-gas 8, 80
Low-level ionizing radiation 5, 90, 6, 83, 84
Low-mass container for thermonuclear fuel 10, 105
Lubricating oil 6, 56, 135, 9, 183
Luminosity 9, 87, 12, 42
Lunar colonies 5, 198, 6, 13, 11, 189
Luster 8, 68

— M —

Machining method 11, 32
Magellanic Clouds 9, 84
Magma tubes 6, 111, 9, 76
Magnetic applications 1, 55, 2, 29, 49, 3, 13, 115, 4, 47, 131, 209, 5, 35, 45, 129, 6, 64, 155, 7, 82, 8, 17, 31, 44, 9, 29, 88, 96, 10, 29, 42, 58, 110, 11, 32, 49, 89, 127
Magnetic substorms 9, 29
Magnetite 6, 83
Magnetohydrodynamics 1, 22, 88, 3, 40, 5, 62, 6, 59, 7, 82
Magnetopause 8, 44
Magnetosphere 1, 22, 11, 49
Magnetotactic bacteria 6, 83
Maintenance operations 3, 22, 4, 137, 7, 97, 9, 68
Male chauvinism 7, 142, 8, 154
Management 3, 97, 4, 32, 10, 73, 11, 74, 106, 12, 99
Maneuverability 10, 54
Manufacturing costs 1, 100

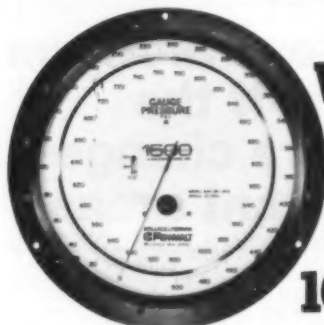
Manufacturing engineers 2, 48
Marine R&D 8, 37, 11, 56
Mariner 6, 35
Market research 3, 9, 4, 48, 74, 103, 12, 99
Marketing concept 4, 103, 5, 72, 138
Mars 5, 198, 6, 155, 8, 44, 11, 31
Mass analyzer 4, 145, 11, 127
Mass and Charge Analysis (MACS) 11, 127
Mass flow measurement 7, 41, 8, 54
Mass-limited system 9, 81
Mass spectrometer 2, 85, 100, 3, 103, 4, 57, 145, C11, 5, 72, 7, 143, 9, 39, C1, 12, 56
Mass storage devices 4, 42, 10, 157
Massachusetts Institute of Technology 10, 86, 106, 114
Materials science 3, 28, 6, 105, 8, 62, 11, 90, 112
Matrix isolation 1, 50, C1, 11, 194
MBA Associates 10, 126
MBA syndrome 4, 62
Mead Corp. 10, 137
Measurement system 1, 159, 5, 197, 7, 97, 8, 75, 9, 129
Mechanical vacuum pumps 6, 84
Medical research 4, 169
Medium-energy double Compton telescope 1, 38
Megabit memory device 6, 36
Melt extraction process 7, 103
Membrane 5, 86, 6, 105
Mercury 10, 225, 12, 13
Metadi 9, 138
Metal fatigue 12, 90
Metal-fiber-filled composites 7, 103
Metal films 6, 70
Metalization 4, 95, 5, 145
Metallic fluidized beds 7, 49
Metallic hydrogen 4, 57
Metallic mud 1, 75
Metallographic polish 9, 138
Metallurgical process 11, 41, 12, 90
Metal phthalocyanine 6, 43
Meterology 6, 105, 12, 38
Methane 4, C7, 9, 68, 10, 29, 12, 66
Methanol-gasoline blends 4, 80
Methylchloroform 5, 36
Methyl silicone 9, 142
Metric system 1, 159, 3, 182, 4, 205, 5, 196, 7, 97, 143, 9, 220, 12, 136
Metrology laboratories 7, 97, 9, 129
Mettler Instruments AG 10, 113
Michelson interferometer 1, 80, 3, 91
Microanalysis 12, 76
Microbiologists 6, 83
Microcircuitry 6, 99
Microcomputer 2, 92, 100, 4, 86, 5, 123
Microcrystals 3, 27

Microdisc fabricating 12, 40
Microelectronics 2, 92, 6, 123, 135
Micromeritics 11, 49
Micropattern analyzer 10, 114
Microphysical processes 6, 155
Microporous polymer matrix 10, 130
Microprocessor 2, 105, 3, 21, 5, 72, 6, 123
Microquake swarms 18, 42
Microscopy 2, 129, 3, 85, 91, 6, 99, 9, 138, 12, 90
Microstructure 5, 28
Microwave cavity 2, 47
Microwave link 3, 31, 12, 68
Microwave radiation 3, 21, 9, 39, 12, 82
Microwave Semiconductor Corp. 10, 98
Microwave spectrum analyzer 10, 102
Mid-air collisions 12, 25
Mid-ocean eddies 6, 43
Migration of birds 6, 83
Milk protein 6, 73
Milky Way 5, 36, 6, 51, 9, 42, 84
Milling 1, 21
Mineral extraction process 8, 37
Mine shaft 6, 36
Mineral shortages 9, 29
Minicomputers 2, 100, 3, 72, 5, 123
Miniaturization 12, 82
Mission-Adaptive Wing (MAW) 4, 88
Misspending 8, 46
Mist flow cycle 8, 50
Yodal analysis 4, 123
Modernization 5, 138, 6, 53, 88
Modular office units 2, 78
Modulated molecular beam mass spectrometer 10, 85
Molding plastic and glass 4, 52
Molecular beam epitaxy 1, 107
Molecular emission 7, 50
Molecular ions 8, 31
Molecular movements 4, 42
Molecular sieve columns 3, C3, 6, C1
Molecular specificity 11, 31
Molecular structure 4, 60, 11, 127
Molecular weight determination 2, 129
Molten metal refinement 2, 135
Molten salt 2, 62
Molten-salt chemical waste destruction system 10, 134
Money market 11, 106, 12, 19
Monochromatic light 1, 55, 8, 43, 10, 146, 12, 82
Monsoon experiment 8, 54
Moon 6, 13, 9, 30
Mossbauer spectroscopy 6, 83
MOSFET 1, 66
Motion-analysis 5, 166
Motivations 6, 19
Mountain 8, 45

Multichannel analyzer 6, 123, 199, 8, 90
Multicomponent analysis 7, 86, 9, 134
Multiphoton ionization 5, 56
Multiple Mirror Telescope 2, 30, 7, 81
Multitrol traction drive 10, 121
Multispectral scanner 6, 155
Muon detectors 21, 5, 116, 7, 84
Museum of Science and Industry 10, 78
Mutagenic substances 4, C7, 5, 108, 6, 83
Mycobiology 6, 99

— N —

Narrow-gap, liquid-metal current collector 10, 98
Narrow line gamma ray spectrometer 1, 38
NASA 8, 11
NASA Goddard Space Flight Center 10, 117
NASA Langley Research Center 10, 110, 133
NASA Lewis Research Center 10, 90, 106, 121
NASA Marshall Space Center 10, 98
National Bureau of Standards 10, 109, 125, 126
National energy plan 3, 48
National Inventors Hall of Fame 4, 41
National policies 1, 33, 4, 74
National security 8, 45
Natural diamond 9, 138
Natural gas 3, 48
Nd-doped fluorophosphate laser glass 10, 109
Near-specular reflectance 8, 68
Neptune 5, 47, 8, 17
Nernst equation 9, 124
Nerve-deaf 8, 62
Neutral currents 12, 51
Neutral mass spectrometers 2, 85
Neutrino flux 9, 87, 11, 127
Neutrons 2, 49, 54, 4, 3, 42, 47, 10, 35
Neutron radiography 4, 131, 10, 35
New England Nuclear 10, 89
New product planning 6, 27, 8, 23, 43, 11, 23, 12, 19
Nickel carbonyl 12, 25
Nickel-hydrogen battery 11, 31
Nimbus-6 satellite 8, 117
Niobium-titanium filaments 9, 64
Nippon Kogaku K.K. 10, 114
Nitrogen oxides 11, 116
Nitrogen-phosphorus FID 9, C1
Nitrogen sparging 3, C6
Nitrous oxide 4, C7
Nobel Laureate 5, 35, 116, 7, 70, 11, 116, 12, 51
Nominal value 8, 75



W&T Gauge Accuracy.
Now up to 1000 psig.

Wallace & Tiernan's famous aneroid pressure gauges can now deliver their high accuracy at gauge pressures to 1000 psig. Both the Series 1500 (8 1/2" diameter, 1/1500 f.s. accuracy) and the Series 1000 (6" diameter, 1/1000 f.s. accuracy) now have ranges from 0-125" water to 0-1000 psig. Your choice of calibrations, including metric units. The new ranges are calibrated for liquid service, but can be used for gas with negligible (1/1500) calibration error.

To achieve these accuracies, dials are custom calibrated, with each individual dial matched to its own mechanism. Readability is 0.02% f.s. Calibration is traceable to NBS.

For full details, write Wallace & Tiernan Division, Pennwalt Corp., 25 Main Street, Belleville, N.J. 07109 Department A-205 R

WALLACE & TIERNAN
PENWALT
EQUIPMENT • CHEMICALS
HEALTH PRODUCTS

Avoid laboratory instrument problems due to solvents. Order high purity residue-free solvents from Burdick & Jackson Laboratories.



BURDICK & JACKSON LABORATORIES, INC.
MUSKEGON, MICHIGAN 49442

(616) 726-3171

Nonconsumable electrode arc melting 2, 135
Non-contacting electrodes 7, 51; 12, 82
Nondestructive testing (NDT) 4, 131
Nonexhausting pump 8, 84
Northrup Corp. 10, 133
Nuclear energy 1, 22; 2, 39; 4, 131; 5, 90; 6, 84; 7, 57; 11, 138; 12, 38
Nuclear fusion 1, 88; 3, 44; 9, 87
Nuclear magnetic resonance 3, 103; 7, 143
Nuclear non-proliferation 5, 97; 9, 62
Nuclear reactor 1, 22; 2, 39; 8, 3, 48; 4, 131; 5, 90; 9, 7; 6, 43; 7, 25; 5, 144; 8, 37; 9, 25; 215; 10, 29; 42, 50, 227
Nuclear safety 6, 53
Nuclear science 9, 11
Nuclear warfare 2, 11; 7, 76; 9, 51; 12, 82
Nuclear wastes 2, 64; 4, 66; 5, 97; 6, 36; 9, 68; 11, 127
Nucleation 7, 64
Nucleotide sequence 2, C4

- O -

Oak Ridge National Laboratory 10, 105, 122, 134, 138
Occultation measurements 1, 35
Ocean current 3, 33; 7, 49; 8, 2
Ocean R&D 1, 75; 5, 28; 6, 155; 11, 127
Ocean thermal energy 8, 50
Off-road equipment 6, 117
Offshore oil industry 9, 94
Oil 10, 29; 11, 121
Oil embargo 3, 48
Oil shale 3, 33; 4, 78
Oil spills 5, 27; 8, 117
Olfactory fatigue 11, 195
Olin Corp. 10, 90
Opaque samples 7, 92; 8, 68; 10, 146
Open office 1, 133
Open tubular columns 9, C1
Open universe 6, 52
Opportunity 2, 11; 3, 179; 11, 11, 17
Optical cables 12, 68
Optical commutator 12, 82
Optical crystal 11, 80
Optical microscopy 3, 3; 4, 145; 9, 146
Optical pyrometry 12, 82
Optical quality 2, 40
Optical storage 1, 55
Optical telescope 2, 40; 4, 84; 5, 36
Optical waveguides 12, 68
Opto-electronics 2, 40; 7, 52
Orbital flights 11, 50, 74
Organic dye laser 8, 31
Organizational behavior 3, 97
Organo-phosphorus compounds 12, 51
Orion Research Inc. 10, 85
Out-of-ecliptic solar orbit 10, 58
Owens-Illinois 10, 109
Oxford Instruments 10, 110
Oxidation potential 1, C6
Oxide formation 7, 49; 10, 73
Oxygen contamination 2, 122; 6, C1; 11, 41
Oxygen-depleted brine 10, 35
Oxygen-18 4, C14
Oxygen electrode 10, 85
Ozone 5, 36; 11, 127; 12, 29

- P -

Pacemaker 4, 169; 10, 35
Packaging revolution 4, 86
Packing densities 1, 55
Paper mill boiler 12, 90
Parallel processing 10, 157
Parallel propagation 9, 88
Paramedics 4, 169
Parasitic capacitances 11, 141
Particle accelerators 4, 57
Particle analysis 2, 112; 129; 5, 62; 116; 6, 105; 7, 103; 8, 3; 9, 138; 146; 10, 41; 11, 127; 12, 42, 56, 69
Partition columns 3, C3
Part-timers 11, 31
PASCAL high-level language 5, 118
Pascal measurement standard 12, 99
Passive solar energy heating 9, 56; 10, 43, 106
Patent Management 3, 28; 4, 62; 64; 103; 7, 41; 145; 9, 108; 11, 90; 110; 135; 12, 9
Pattern recognition 3, 109; 5, 116; 12, 51
Pay-offs 11, 96
Peace 9, 136
Peak numerical aperture 12, 68
Pelletizing 2, 122
Pendulum 1, 60
People's Republic of China 2, 48; 70; 5, 138; 8, 149; 12, 199
Perigee 10, 42
Periodic table 9, 17
Peripheral 10, 151; 152; 157
Perkin-Elmer Corp. 10, 82
Permanent magnet alloys 9, 83
Perpendicular propagation 9, 88
Peterson, Russell 4, 70
Petrified cotton 2, 30
Petroleum crisis 6, 56; 12, 36
Pharmaceutical analysis 1, 80; 3, 103; 7, 86
Phase contrast 3, 91
Phase monitoring inspection system 10, 114
Phenolic copolymer 2, 66
Phenyl methyl silicone 9, 142

Philips, N. V. 10, 86
Gloeilampenfabrieken 10, 86
Phillips Petroleum Co. 10, 85; 137
Phobos 3, 22
Phonetics 5, 104
Phosphor 1, 3
Photoacoustic spectroscopy 7, 92; 10, 146
Photocells 6, 67
Photochemical reactions 6, 111
Photochemical transducers 6, 67
Photodensitometer 4, 70
Photodetector 1, 27; 8, 68; 12, 68
Photodiode array system 7, 86
Photoelectrolysis 1, 28
Photolithography 5, 129; 7, 70
Photomicrographs 12, 90
Photon 4, 111; 10, 41; 12, 51
Photoreactive material 1, 55; 3, 103
Photoresist 11, 141
Photosynthesis 9, 42
Phototransistor 12, 82
Photovoltaics 1, 88; 3, 22; 40, 8, 38; 9, 40; 70; 10, 68; 11, 72; 12, 36
Phthalocyanines 6, 43
Piezoelectric crystals 2, 129; 6, 67
Pig pregnancy detector 7, 141
Pilot plant 2, C16; 4, 103; 5, 109
Pioneer missions 2, 85; 3, 68; 4, 7, C1; 6, 35; 11, 17; 45; 9, 101; 11, 49
Pioneering spirit 5, 198; 11, 189
Pions 5, 116; 7, 84
Pipeline processing 10, 157
Pirani gauge 10, 180
Pitot tube 6, 129
Pittsburgh Conference 2, 40; 100; 7, 72; 6, C6; 7, 41; 12, 29
Pituitary glands 10, 52
Plane of the ecliptic 10, 58
Planetary formation 2, 85
Planetary ring 5, 47; 6, 155; 11, 49
Planetologists 2, 98; 4, 103
Plasma 1, 52; 2, 49; 135; 5, 56; 7, 50; 60; 8, 44; 9, 88; 11, 41
Plasmid 10, 52
Plastic housings 4, 119
Plastics and rubber exposition 5, 38
Plastics 8, 48; 68; 9, 146; 11, 23
Plate technics 5, 47
Plating technology 4, 95
Plutonium 4, 131; 11, 138
Polarimeter 3, 21; 9, 134
Polarized light 3, 91; 5, 36; 12, 74; 82
Pole-piece temperatures 3, 115
Political advocacy 6, 197; 7, 142; 11, 64
Pollution 2, 30; 47; 48; 5, 62; 6, 43; 74; 117; 155; 7, 50; 51; 64; 8, 37; 117; 9, 30; 40, 215; C1; 10, 42; 11, 31
Polyacetylene 6, 69
Polybenzimidazole (PBI) 10, 230
Polycyclic aromatic hydrocarbons 8, C1; 9, 142
Polydivinylidene chloride 6, 67
Polyethylene terephthalate resins 1, 22
Polyimide 6, 67; 10, 133; 230
Polymer chemistry 2, 39; 6, 69; 8, 94; 9, 146; 10, 41; 11, 49
Polymerized divinylbenzene 5, C4
Polymethyl methacrylate 8, 48; 11, 196
Polymorphous 3, 69
Polypeptide chains 2, C4
Polypyrrole 6, 69
Polyurethane 7, 107; 121; 12, 68
Population growth 11, 23
Pore size distribution (PSD) 2, C1
Poroscopy 3, 85
Porous element heating (PEH) 3, 66
Porphyry catalysts 11, 42
Position sensors 9, 94; 10, 121; 163
Positive thinking 11, 17
Postions 5, 116; 10, 41
Postal Service 2, 188
Postdoctoral opportunities 10, 36
Potassium vapor 8, 31
Potentiometric stripping analysis 9, 124
Powders 10, 146; 11, 112; 135
Power consumption 1, 21; 22; 60; 3, 11; 5, 28; 6, 44; 117; 8, 84; 10, 151; 12, 29; 68
Power distribution 7, 70
Power field effect transistor 10, 98
Pratt & Whitney Aircraft 10, 118
Precession forces 4, 209
Precision electron beam welding processes 10, 97
Precision measurement 11, 42
Prefab houses 3, 131
Pressure cooker 2, 62
Pressure differential 3, 115
Pressure fluctuations 7, 92
Pressure-sensitive adhesive 8, 94
Priestley Medal 9, 40
Primary standards 7, 97; 9, 129
Primer for electrodeposition 10, 133
Primeval clouds 12, 54
Priority list 1, 136
Probability 1, 100; 2, 129; 7, 51; 11, 114
Problem solving 4, 103; 9, 108
Process for granular activated carbon 10, 137
Process for production of carbonless paper 10, 137
Product integrity 3, 97; 9, 114
Product planners 11, 23
Product protection 9, 108
Product stewardship 9, 114

Production control 2, 48; 4, 111; 5, 123; 129; 6, 88; 10, 68
Productivity 2, 30; 48; 151; 4, 62; 103; 111; 5, 108; 6, 117; 7, 142; 11, 110
Profile control 11, 141
Professions 3, 67; 77; 5, 75; 7, 75; 8, 90
Profit 6, 27; 8, 154; 9, 108; 11, 90
Project Mohole 9, 94
Propane gas 9, 70
Propeller 5, 28
Proposition 13 1, 161; 9, 108
Prosthetics 12, 35
Protons 10, 41
Psychodynamic forces 6, 19
Psychosomatic illness 11, 11
Psychophysical analysis 8, 68
Public documents 12, 62
Public relations 1, 9; 4, 103; 9, 101
Pulsar 2, 83; 11, 50
Pulse height analyzer 12, 129
Pulsed excimer 1, 141
Pure research 11, 98
Purcycle Corp. 10, 138

- Q, R -

Quality Assurance 1, 80; 4, 111; 5, 108; 7, 86; 8, 68; 9, 42; 64, 114, 146, 210; 10, 146; 12, 99
Quantometer 10, 73
Quantum counter 7, 50
Quantum mechanics 7, 41; 11, 51
Quark-antiquark annihilation 7, 84; 10, 41
Quasars 2, 88; 4, 84; 6, 51; 52; 6, 44; 9, 84; 11, 50, 64
Radar mapping 8, 45
Radial Compression Separation 4, C1
System (RCSS) 5, 90; 6, 35; 84, 111, 199
Radiation 7, 41; 57; 8, 37; 9, 29; 11, 49; 12, 38
Radiation pyrometer 10, 141
Radiation slowing 2, 83
Radioactive elements 4, 66; 11, 127
Radioactivity 2, 49; 64; 6, 84; 199
Radio communications 7, 33
Radio-frequency emissions 2, 84
Radio frequency interference 4, 119
Radio galaxies 6, 48
Radiography 4, 131
Radioisotope 6, 123; 10, 58; 11, 127; 138
Radio telescope 3, 131; 4, 84; 5, 35; 36; 8, 31; 11, 50; 64; 12, 13
Railroad technology 2, 74
Rain 6, 70
Raman spectroscopy 4, 60; 11, 31; 116; 121
Random-access memory 9, 30; 10, 34
Random error 8, 75; 9, 129
Rapid-scanning spectrophotometer 7, 86
Rare earths 6, 36; 64; 12, 82
Rasmussen Report 3, 48
Rationing 4, 80
Reactivity 9, 121
Reactor coolant 11, 138
Reactor licenses 7, 57
Real-fringe laser anemometry 11, 121
Recession 11, 11
Recharge basins 3, 62
Reciprocal agreements 1, 44
Recombinant DNA 1, 33; 2, C4; C16; 5, 89; 10, 52
Recruiting advertising 9, 55
Recycling process 10, 36; 73
Redox energy storage system 10, 106
Redox potential 9, 124
Redshift 8, 44
Red tide 8, 117
Refining lubricating oil 10, 137
Reflectance 7, 103; 8, 68; 10, 146; 12, 82
Reflectivity 2, 30; 8, 68; 9, 183; 10, 42
Refractive indices 3, 91; 7, 86
Refracting solids 10, 146
Refractory attack 2, 122
Refrigeration 6, 44; 64
Regulations 2, 23; 3, 48; 4, 103; 119; 5, 72
Reinforced composites 10, 163
Relativity 2, 83
Relaxation and sleep 12, 135
Remote sensing 2, 29; 6, 92; 155; 7, 30
Reproducibility 4, C1; 8, 75; 9, 134
R&D forecast 1, 77; 8, 151
R&D funding 1, 9, 21, 72, 77, 87, 93; 2, 23; 30, 49, 76, 100, 151; 3, 27, 32; 4, 48; 5, 27; 7, 33, 75; 11, 32; 54, 56, 98; 102; 110, 192
R&D industry 2, 240; 3, 9, 179; 4, 198; 5, 11, 21, 196; 6, 43, 151; 9, 146; 10, 222; 11, 96, 135, 200; 12, 62; 131
R&D management 1, 28, 93; 2, 78; 3, 21; 4, 42, 48, 49, 62, 99, 103, 202; 5, 61, 108; 7, 75; 8, 62; 11, 135
Research Association program 10, 36
Research Council Rutherford Laboratory 10, 110
Resistivity 5, 129; 8, 80
Resonant frequency 1, 127; 4, 123; 7; 103; 9, 52
Resources conservation 5, 76; 6, 155
Responsibility 2, 17; 4, 114
Retention time 2, 112; 6, C1; 9, 122
Retirement regulations 3, 77
Reverse osmosis 4, 32; 6, 69
Reversed-phase chromatography 1, C6; 2, 112; 8, C1

RF field effect transistors 10, 98
Ringed planet 1, 35; 5, 47; 7, 144; 9, 101
Robots 3, 72; 6, 139; 155; 10, 29
Rockwell International 10, 134
Rogers Corp. 10, 102
Rots pumps 10, 167
Rotating Target Neutron Source-II 4, 47
Russell, Dr. Allen S. 10, 3, 73

- S -

Safety 4, 70; 103; 5, 108; 6, 53; 139; 7, 57; 141; 9, 114; 10, 180
Salaries 3, 77; 4, 11, 98, 99; 5, 11; 6, 197; 7, 142; 9, 216; 10, 222
Salty basin 10, 35
Sample injection loop 2, 112; 6, C1
Sandwich holography 5, 133
Santa Sindone 12, 74
Sapphire 11, 141
Satellite receiving station 11, 56
Satellites 2, 30, 48; 5, 165; 6, 36; 92; 155; 7, 121; 8, 17, 117; 11, 31, 56
Satellite-tracking systems 11, 31
Saturation level 11, 23
Saturation magnetization 11, 32
Saturn 3, 22, 5, 47, 5, 198; 8, 17; 9, 101; 11, 49, 189
Scaling factor 8, C1
Scanning electron microscopy (SEM) 6, 99; 105; 135; 8, 94; 12, 56, 90
Scanning transmission electron microscope (STEM) 6, 198
Scanning SIMS system 11, 127
Science and technology 1, 33; 2, 17, 30, 48; 129; 4, 200; 5, 108; 6, 35; 74; 9, 55; 11, 17, 31, 54, 56, 102, 12, 13, 62
Scientific Apparatus Makers Association 1, 77; 2, 48; 6, 129; 8, 38
Scientific publications 12, 62
Scientist of the Year 10, 3, 73; 11, 135
Scholarly journals 12, 62
Schott 10, 109
Screw-worms 7, 121
Sea current power generation 7, 82
Search for extra-terrestrial intelligence 12, 13
Seasat satellite 6, 92; 155
Seawater 4, 32; 9, 30
Secondary auroral electrons 9, 88
Secondary inventions 9, 108
Secondary Ion Mass Spectrometry (SIMS) 11, 127
Security 12, 68
Sedimentation 2, 129; 9, 146; 10, 35
Segmented-flow analyzers 9, 134
Seismic monitoring 5, 54; 7, 76; 9, 96
Seismograph 6, 36; 10, 42; 11, 42
Selected Ion Monitoring (SIM) 4, C11
Selective Catalytic Reduction 3, 28
Selenium metabolism 5, 15
Self confidence 11, 11
Semiconductor 1, 27, 28, 93, 107; 2, 105; 3, 28; 5, 84; 129, 154; 6, 36; 7, 192; 10, 109; 11, 72, 141; 12, 40, 82, 99
Services crisis 1, 161
Sex bias 4, 98; 6, 197
Seyfert galaxies 2, 88
Shadowing effect 11, 141
Sherwin-Williams Co. 10, 138
Shielding 7, 103
Ship simulator 2, 68
Shiva 10, 42
Shock wave 5, 62; 8, 56; 9, 218
Short Pulse Laser (SPL) 5, 56
Shrinking sun 9, 87
Shroud of Turin 4, 57; 12, 4
Side-channel analyzers 12, 83
Silica-on-silica fibers 12, 123
Silicon 1, 66; 3, 40; 5, 129; 9, 70; 10, 68; 122; 11, 141; 12, 36
SOS (silicon-on-sapphire) 11, 141
Silicon tetrafluoride 10, 68
Simulators 2, 68; 5, 38; 6, 3, 70
Single-column analysis 9, 142
Single crystal diffractometer 11, 112
Single liquid phase 9, 142
SI System 4, 205; 5, 196; 7, 97; 143; 9, 129
Size distribution 2, 112; 9, 146
Size Exclusion Chromatography 2, C1
Size-weight distribution 6, 105
Skew rays 12, 68
Skin cancer 5, 36
Skylab 3, 131; 8, 3; 9, 3, 39, 101; 11, 74
Slag attack 12, 90
Small business 1, 42; 11, 98
Smelting process 10, 73
Snow handling 2, 11; 8, 117
(SN) 6, 69
Society and the economy 4, 49; 5, 138; 6, 88; 8, 23
Sodium fluoride 10, 68
Sodium hydrogen phosphates 9, 30
Soil mechanics 5, 38; 10, 42
Solar cells 3, 40; 5, 165; 9, 72; 10, 68; 11, 72; 12, 36, 38
Solar coal gasification 9, 40; 12, 46
Solar energy 1, 28, 72, 30, 39; 3, 131; 4, 60; 5, 35, 84, 106; 6, 88; 7, 33; 9, 29, 40; 10, 29, 35; 11, 32, 127; 12, 25, 35, 90
Solar flares 5, 49; 9, 29; 218; 11, 49
Solar homes 1, 21, 27; 10, 43
Solar orbit 11, 50
Solar power satellite 6, 92; 10, 58

Solar photovoltaic energy	4, 31; 5, 86; 9, 72	Solar Sail	9, 72	Solar system	11, 189; 12, 56	Solar wind	3, 180; 8, 44	Solid-state electronics	11, 112, 141; 12, 82	Somatostatin	10, 52	Sonic principal	5, 129; 10, 41	Soil	7, 33; 11, 118	Southwest Research Institute	10, 89, 90	Spacecraft	1, 22; 4, 42; 6, 92; 8, 48; 9, 53; 10, 17; 11, 31	Space science	1, 38; 2, 29; 3, 62; 4, 169; 5, 38, 198, C1; 6, 13, 92, 155, 195; 7, 17; 8, 37; 9, 183; 11, 50, 54, 64, 189; 12, 25, 131	Space Shuttle	1, 38; 3, 27, 72; 4, 90; 5, 48, 198; 6, 92, 155; 7, 17; 8, 45, 56; 9, 101; 10, 58, 183; 11, 74, 189	Spark-plug timing	7, 33	Spatial resolution	11, 116, 127	Speckle interferometry	7, 81	Spectra Physics Corp.	10, 109	Spectroscopy	3, 28; 5, 49; 7, 86; C1; 8, 43, 68; 9, 146; 10, 220; 11, 194	Spectrum-efficient network unit	10, 102	Spectrally reflected light	6, 68; 10, 146	Speech pattern	1, 21	Speed-vs-time sequence	6, 117	Spelling and learning aid	10, 94	Spherical bearing surfaces	7, 55	Spinair	2, 88	Spinoff	6, C1; 9, 183	Spiral galaxy	5, 36	Spillless injection	9, C1	Split-ring resonator	2, 29; 9, 52	Sputtering process	8, 84; 11, 127	SSTs	6, 74	Stable vortex arrays	11, 51	Stability	5, 11, 27; 7, 142; 9, 64; 10, 54	Stagnation regions	11, 121	Standards	7, 86, 97, 99; 8, 68, 75; 10, 225; 11, 112	Stand-off sensor	12, 82	Star formation	5, 36	Stark effect	7, 50	Status reporting	11, 74	Steam turbine	3, 46; 4, 74; 11, 138	Steel production	1, 22; 4, 32; 8, 37; 11, 41	Stepper motors	9, 96	Stereo imaging	6, 99	Stereoscopic color TV	5, 35	Steward	9, 114	Sticking coefficients	1, 107	Stirling cycle	6, 44	Stokes Law	2, 129; 9, 146	Storage ring accelerators	10, 41	Stray radiation	4, 199	Strong-motion stations	5, 54	Strong nuclear force	10, 41; 12, 51	Strontium-90 fluoride	12, 38	Structural alloys	10, 122	Structural changes	4, 123	Subjective refraction systems	10, 117	Submersible research craft	9, 76	Submillimeter wave spectrometer	10, 86	Subnuclear particles	5, 116; 6, 35; 10, 41	Subsurface water	8, 117	Subway system	12, 29	Sugars	3, 62	Sulfate-reducing bacteria	12, 90	Sulfur	10, 89	Sulfuric acid	7, 64; 8, 37	Sulfur dioxide	8, 37	Sunshine blockage	9, 29	Superconducting electric generator	1, 58; 4, 57; 7, 70; 9, 64	Superconducting linear accelerator (linac)	2, 29	Superconducting magnets	6, 64; 7, 82; 10, 110; 12, 56	Superconducting materials	4, 47; 9, 52	Supercritical fluids	11, 51, 53	Superheavy elements	9, 17	Suprathermal electrons	5, 56	Surface analytical techniques	1, 107; 2, 100; 8, 39; 10, 73	Surface enhanced Raman Spectroscopy (SERS)	4, 60	Surface finish	8, 68; 9, 138	Surface Science Laboratories	10, 82	Surveyor	9, 35	Synectics	9, 108	Synodical period	8, 17	Synroc	4, 66	Synthesis gas	10, 29	Synthetic diamond	9, 138	Synthetic elements	9, 17	Synthetic fuel	3, 33	Synthetic rubber	8, 31	System modeling	4, 123	Systematic error	8, 75; 9, 129	Szygzy	10, 42	Taber abrader	7, 107	Tailing	9, C1	Tandem Analyzer	11, 127	Tapered fluidized-bed bioreactor	10, 138	Tax credits	1, 100	Tax policy	7, 75	Taxonomics	6, 99	Teamwork	5, 138; 10, 73; 11, 135	Technological leadership	2, 23; 3, 67; 4, 64; 5, 36, 201; 6, 43, 88; 7, 75; 9, 11; 11, 74, 189	Technology	1, 33; 2, 11; 4, 62; 10, 5; 2, 66, 72; 6, 36, 74; 7, 41; 8, 23; 10, 23	Technology transfer	1, 42; 2, 39, 151; 3, 131; 4, 169; 5, 165; 6, 74, 155; 7, 121; 8, 43; 9, 183; 10, 183	Tectonic activity	1, 75; 8, 45; 9, 68, 76	Telecommunications	2, 48, 92; 3, 31; 6, 36; 7, 144; 11, 64	Telescope	2, 30, 40	Tenbror	10, 42	Temperature compensation	2, 105	Temperature fluctuations	9, 58	Tension structure	3, 131	Terrestrial magnetism	7, 82	Texas Instruments Inc.	10, 94	Texture	5, 133; 8, 68	Thallous chloride	10, 89	Thermal analysis	6, 62; 9, 90, 146; 12, 58	Thermal conductivity	2, 117; 4, C7; 8, C1; 7, 103	Thermal degradation	6, 56	Thermal design	2, 60, 66; 3, 33; 4, 82; 5, 56; 8, 45; 9, 101, 146; 10, 43; 11, 53	Thermal diffusion coefficient	7, 82	Thermal expansion	2, 117; 5, 145; 6, 135	Thermal loading	11, 118	Thermal stress deflections	2, 54	Thermal tile	9, 101	Thermodynamics	3, 27	Thermoelectric power	6, 69; 2, 38	Thermographic phosphors	12, 82	Thermoluminescent dosimeter	10, 37	Thermocouple fusion reactors	3, 35; 5, 62	3 M Co.	10, 129	Three Mile Island	5, 90; 6, 43; 7, 25, 57; 8, 23; 9, 215	Titan	11, 49	Titanium alloy	5, 38; 7, 144	Toroidal coil	8, 80	Toroid joining gun	10, 110	Torsional natural frequency	1, 60	Toxic substances	5, 108; 9, 114; 10, 35, 36; 11, 31	Trace analyses	9, C1, 124; 11, 127	Traceability	7, 97; 9, 129	Traction motor	10, 62	Trade promotion	3, 67; 4, 48; 5, 138; 12, 99	Translucent solids	10, 146	Transmission	6, 44; 11, 7	Transmission duct	7, 33	Transmission electron microscope (TEM)	6, 99, 105; 10, 126	Transmission line technique	7, 103	Transmittance	8, 68; 10, 146	Transmutation	2, 194	Transonic speeds	8, 31	Transplantation	12, 135	Transportation	4, 31, 209; 6, 117; 9, 114; 10, 62; 11, 23	Trapped miner electromagnetic transmitter	10, 101	Tribological problems	6, 135	Triggered vacuum gap circuit interrupter	10, 101	Trigger processor	5, 116	Tristimulus values	6, 68	Troubleshooting	6, 129	True value	8, 75; 9, 129	Tunable dye lasers	1, 55; 10, 109	Tuning	2, 47	Tungsten halogen lamp	12, 82	Turbid liquids	10, 146	Turbines	3, 33, 46; 4, 77; 5, 62; 8, 50; 11, 138; 12, 35
— U, V —																																																																																																																																																																																																																																																																																																																													
Ultra-black surface																									9, 40																																																																																																																																																																																																																																																																																																				
Ultrasound environment																									1, 107																																																																																																																																																																																																																																																																																																				
Ultrasonic inspection																									1, 127																																																																																																																																																																																																																																																																																																				
Ultrasonic films																									6, 67; 10, 121																																																																																																																																																																																																																																																																																																				
Ultrasonics																									4, 131; 10, 121																																																																																																																																																																																																																																																																																																				
Ultraviolet spectrophotometer																									7, 93																																																																																																																																																																																																																																																																																																				
Uncertainty																									1, 100; 8, 9; 12, 59																																																																																																																																																																																																																																																																																																				
Unification theory																									7, 51																																																																																																																																																																																																																																																																																																				
Uniform measurement																									7, 97																																																																																																																																																																																																																																																																																																				
Union Carbide Corp.																									10, 78, 97																																																																																																																																																																																																																																																																																																				
U.S. Bureau of Mines																									10, 101																																																																																																																																																																																																																																																																																																				
Universal spectrometer																									10, 86																																																																																																																																																																																																																																																																																																				
Uranium 1, 21, 2, 122, 3, 22; 4, 70; 6, 123																									11, 138																																																																																																																																																																																																																																																																																																				
Uranium hexafluoride																									3, 64; 10, 50																																																																																																																																																																																																																																																																																																				
Uranium oxide																									3, 64; 4, 131																																																																																																																																																																																																																																																																																																				
Uranium-zirconium hydride																									4, 131																																																																																																																																																																																																																																																																																																				
Uranus																									1, 35; 5, 47; 9, 101																																																																																																																																																																																																																																																																																																				
Urea																									11, 80																																																																																																																																																																																																																																																																																																				
Utility industry																									1, 87; 3, 48; 5, 97; 6, 35, 43, 7, 25																																																																																																																																																																																																																																																																																																				
UV radiation hazard monitor																									10, 141																																																																																																																																																																																																																																																																																																				
UV/visible spectrophotometer																									7, 86; 9, 134; 10, 146; 12, 58																																																																																																																																																																																																																																																																																																				
Vacuum systems																									1, 107; 2, 135; 5, 116, 145; 6, 135; 8, 50, 56, 62, 84; 10, 114; 12, 99																																																																																																																																																																																																																																																																																																				
Van de Graaff accelerators																									2, 29; 4, 57																																																																																																																																																																																																																																																																																																				
Vane pumps																									8, 84; 10, 87																																																																																																																																																																																																																																																																																																				
Vapor absorption																									10, 146																																																																																																																																																																																																																																																																																																				
Vapor phase growth																									2, 129																																																																																																																																																																																																																																																																																																				
Variable-speed electric motor																									11, 80																																																																																																																																																																																																																																																																																																				
Varian Associates																									10, 78, 102, 114																																																																																																																																																																																																																																																																																																				
Varian/Communications																									10, 78																																																																																																																																																																																																																																																																																																				
Transistor Corp.																									10, 98																																																																																																																																																																																																																																																																																																				
Vehicle efficiency																									6, 117																																																																																																																																																																																																																																																																																																				
Vela nebula																									8, 17																																																																																																																																																																																																																																																																																																				
Venera																									2, 85; 6, 10																																																																																																																																																																																																																																																																																																				
Venture capitalists																									11, 95, 106																																																																																																																																																																																																																																																																																																				
Venus																									2, 85; 3, 69; 4, 45; 10, 125																																																																																																																																																																																																																																																																																																				
Vertical oscillation frequency																									1, 62																																																																																																																																																																																																																																																																																																				

— U, V —

Ultra-black surface	9, 40	Ultraclean environment	1, 107	Ultrasonic inspection	1, 127	Ultra-thin films	6, 67; 10, 121	Ultrasonics	4, 131; 7, 121	Ultraviolet spectrophotometer	10, 93	Uncertainty	1, 100; 6, 75; 9, 129	Unification theory	12, 51	Uniform measurement	7, 97	Union Carbide Corp.	10, 78, 97	U.S. Bureau of Mines	10, 101	Universal spectrometer	10, 86	Uranium 1, 21; 2, 122; 3, 22; 4, 70; 6, 123; 11, 138	Uranium hexafluoride	3, 64; 10, 50	Uranium oxide	3, 64; 4, 131	Uranium-zirconium hydride	4, 131	Uranus	1, 35; 5, 47; 9, 101	Urea	11, 80	Utility industry	1, 87; 3, 48; 5, 97; 6, 35, 43; 7, 25	UV radiation hazard monitor	10, 141	UV/visible spectrophotometer	7, 86; 9, 134; 10, 146; 12, 58	Vacuum systems	1, 107; 2, 135; 5, 116, 145; 6, 135; 8, 50, 56, 62, 84; 10, 114; 12, 99	Van de Graaff accelerators	2, 29; 4, 57	Vane pumps	8, 84; 10, 67	Vapor absorption	2, 52	Vapor phase growth	2, 129	Variable-speed electric motor	11, 80	Varian Associates	10, 78, 102, 114	Varian/Communications	10, 98	Transistor Corp.	6, 117	Vehicle efficiency	8, 17	Vela nebula	2, 85; 6, 111	Venera	11, 98, 106	Venture capitalists	2, 85; 3, 69; 8, 45; 10, 225	Venus	2, 85; 3, 69; 8, 45; 10, 225	Vertical oscillation frequency	1, 60
---------------------	-------	------------------------	--------	-----------------------	--------	------------------	----------------	-------------	----------------	-------------------------------	--------	-------------	-----------------------	--------------------	--------	---------------------	-------	---------------------	------------	----------------------	---------	------------------------	--------	--	----------------------	---------------	---------------	---------------	---------------------------	--------	--------	----------------------	------	--------	------------------	---------------------------------------	-----------------------------	---------	------------------------------	--------------------------------	----------------	---	----------------------------	--------------	------------	---------------	------------------	-------	--------------------	--------	-------------------------------	--------	-------------------	------------------	-----------------------	--------	------------------	--------	--------------------	-------	-------------	---------------	--------	-------------	---------------------	------------------------------	-------	------------------------------	--------------------------------	-------

— T —

Save on Calculators

Model	Your Cost
HP-41C Scient	\$244.95
Card Reader/41C	159.95
Printer/41C	289.95
HP-34C Scient	124.95
HP-38C Bus	124.95
HP-38E Bus	99.95
HP-33C Scient	99.95
HP-33E Scient	74.95
HP-31E Bus, prog	62.95
HP-32E Adv Scient	58.95
HP-31E Scient	42.95
HP-67 Scient Prog	299.95
HP-97 Scient Print	594.95
HP-29C Scient c/m	139.95
HP-92 Bus, Print	399.95

"C" stands for continuous memory
We carry an enormous stock of HP accessories.
All units come complete. One year guarantee by HP.

**hp HEWLETT
PACKARD**



TEXAS INSTRUMENTS

TI-59	209.95	TI-25	28.95	MBA	58.95
PC100C	146.95	TI-25	23.95	Bus Card	35.95
PC100A for 59-56-52	179.95	TI-5040	54.95	Data Card	23.95
TI-58C	94.95	TI-5100	43.95	Speak & Spell	54.95
TI-67	49.95	TI-5200	Call us	TI Computer 99/4	Call us
TI-55	35.95	TI-5225	Call us	TI Translator	259.95
TI-50	35.95	TI-5230	Call us	TI Thermostat	109.95

Huge inventory of TI accessories on hand at all times, guarantee by TI



SEIKO SPECIALS 320 WATCHES TO CHOOSE FROM

"Digiana" digital/analog	SS 199.95	Worldtime, Alarm		Memory Bank Calendar SS	169.95
Carrier type "Tank" Mens/Ladies		Perp Calendar SS	199.95	Alarm Digital Quartz SS	129.95
goldtone	187.95	Calculator Watch, Alarm SS		Multi Alarm Goldtone	199.95
Musical Alarm		Chronograph, Digital SS	119.95	Dual Time Zone Digital	99.95
Chronograph SS	199.95	Alarm Chronograph SS	159.95	Divers 500 FT Quartz #60581	223.95
		Solar Alarm Chronograph SS	189.95		

Large selection Seikos. Also TI, Juvena, Uti, Casio & Gruen.

SPECIALS

Sony TVs all models	Call us	Craig Translator	Call us
Sony Betamax SL5400 4 1/2 hrs. 979.95	RCA Select VDT600 6 hrs. 1,089.95	Dictating Machines all kinds	Call us
Casio-Sharp-Canon-Boris-Chess games-Victor-Sanyo-Pearlcoorder-Polaroid-Panasonic-Amana-Litton-Apf-Atari-Navtronic and others.			

Prices are f.o.b. L.A. Add \$4.95 for shipping/handling calls in USA. CA residents add 8% sales tax.
We will best any advertised price if this comparison has the goods on hand. Goods subject to availability.
Ask for our 1983 price catalog. Call Monday thru Saturday, 1AM to 6PM.



Outside CA, toll free
In CA, Call below #s
800-421-8045

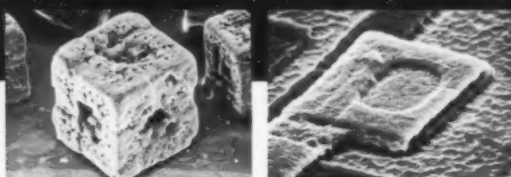


OLYMPIC SALES COMPANY INC.

216 South Oxford Avenue • P.O. Box 26048 • Los Angeles, CA 90004
(213) 387-3901 or (213) 387-1202 • Telex 87-3477

CIRCLE 243 ON INQUIRY CARD

Now! Analyze your specimens in our \$1,000,000 fully equipped laboratory



The Cambridge Application Lab, previously reserved for the use of prospective owners of Stereoscan® SEM's and Quantimet® image analyzers, is now available to analyze whatever specimens, materials or products you submit. This enables you to put the most advanced equipment and the most knowledgeable experts in these fields to work for you.

Metallography □ Fractography □ Automated wave-length and energy dispersive X-ray microanalysis □ Particle size distribution □ Crystal orientation □ Forensic (automated airborne particulate analyses) □ Total characterization of powders and porous metals.

Darkroom on premises for fast preparation of your slide presentations.

Cambridge Instrument Company, Inc., 40 Robert Pitt Drive, Monsey, NY 10952. (914) 356-3331 Telex 137-305

Cambridge IMANGO

CIRCLE 244 ON INQUIRY CARD

Very large scale integration 4, 86, 7, 70
Vibrational behavior 4, 123
Viking spacecraft 4, C1
Vinland Map 12, 76
Viruses 10, 35
Viscosity 3, 115
Visible universe 4, 44
Visual inspection systems 7, 52
Voice recognition 5, 104
Volcanic activity 5, 47; 6, 111; 4, 45; 9, 76
Voltammetric technique 9, 124
Vostok spacecraft 10, 11
Voyager 3, 22, 70; 5, 47; 6, 35;
8, 17, 44; 9, 3, 101; 11, 49

— W, X, Y, Z —

Wafer cooling system 10, 102
Wafer thickness and flatness 5, 129
Wall effects 9, 56, 86; 11, 127
Warm-water oases 9, 76
Waste control 6, 36, 56; 9, 68, 114,
121; 10, 47; 12, 38
Water 3, 33, C6; 4, 41; 5, 72; 6, 53;
7, 51, 66; 8, 37, 117; 10, 138; 12, 29
Waveform recorders 10, 151, 152
Wavelength-dispersive x-ray
fluorescence 4, 111; 6, 123, 199; 11, 112
Wave-plasma interactions 9, 88
Waveguide 12, 68
Weak nuclear force 10, 41; 12, 51
Wear conditions 6, 135; 7, 107
Weather data 2, 11, 30; 6, 155; 7, 121;
11, 127; 12, 135
Weight-alleviation device 5, 168
Weight control 12, 135
Weight savings 10, 54; 12, 82
Westinghouse Electric Corp. 10, 78, 102
Wetlands 4, 117
Wheel energy 6, 117
White hole 2, 88
Williamson Corp. 10, 141
Wind energy 3, 22; 6, 36; 7, 41; 12, 107
Wind systems 1, 88; 4, 31; 12, 107
Winning products 10, 78
Wollaston prism 3, 91
Women in R&D 7, 77; 4, 98; 5, 11; 6, 35; 11,
198
Women's rights 6, 197; 9, 215, 218
Wood chips 10, 29
Word processors 7, 144
Work ethic 3, 9; 6, 139
Working fluid 8, 50; 9, 30
Xenon ions 8, 31
X-rays 5, 56, 165; 6, 35, 84; 8, 17; 11, 112,
135
X-ray diffraction 6, 135, 143; 7, 60;
8, 94; 11, 112, 12, 90

X-ray fluorescence 4, 111; 6, 105, 123,
6, 62; 12, 90
X-ray imaging 5, 56
X-ray lithography 4, 86; 7, 70
X-ray telescope 6, 52
Yields 12, 51
Zero error 4, 200; 7, 99; 12, 75
Zero-power reactors (ZPR) 2, 54
Zinc coatings 4, 119

AUTHORS' INDEX

Acker, Fabian 6, 53; 7, 51
Agnes, Ted 3, 48; 5, 89, 90; 6, 74; 7, 57; 8, 44;
9, 84, 87; 10, 68; 11, 51, 64, 90, 102; 12, 56
Ahmed, W.U. 9, 138
Alt, R.B. 9, 142
Altmayer, L.H. 12, 82
Alves, R.B. 12, 122
Anderson, R.N. 1, 107
Arthur, J.R. 2, 129
Austin, T.M. 2, 122
Bakshani, Nandkumar 6, 53
Bartle, Alison 6, 143
Beale, H.A. 2, 135
Bhat, G.K. 7, 103
Bhushan, Bharat 7, 92
Bigg, D.M. 3, 97
Blank, Richard E. 5, 116
Block, Robert G. 10, 156
Bonner, Michael K. 3, C6
Bower, Ray 2, 135
Bradley, Tim 10, 148
Bunshah, F.F. 4, 103
Cahill, Jerry E. 1, 70; 4, 78
Carlton, Irving D. 4, 137
Carr, Judy 10, 157
Chambers, R.A. 2, C4
Cole, Denney R. 10, 73
Crea, Roberto 11, 121
Curtis, Carolyn 2, 112
Dale, B.W. 11, 132
DeLand, Phillip H. 4, 128; 11, 132
Dines, Glen 12, 99
Dorris, Robert T. 11, 116
Drake, M.C. 10, 167
Duval, P. 12, 68
Duyan, Peter Jr. 9, 108
Eiffel, R.J. 3, 72
Eshelman, R.H. 5, 138
Ewing, H. Griffin 6, 105
Fassiska, E.J. 7, 107
Fearon, Gordon 8, 80
Fisher, Sidney T. 3, 109
Fitzpatrick, David 10, 123
Frand, Erwin A. 1, 17; 2, 23; 3, 17; 4, 25;
5, 21; 6, 27; 7, 25; 8, 23; 9, 25; 10, 23; 11, 23
Freeman, R.R. 9, 142; C1

Frick, William G. 9, 121
Froehlich, Peter 2, C4
Gedcke, D.A. 4, 111
Gerboosi, P.F. 4, 119
Graaback, A.M. 9, 124
Graham, James D. 6, 129
Gray, William 4, 131
Gwynne, Peter 1, 34, 38; 2, 85, C16; 3, 40,
44, 69, 72; 4, 70, 74; 5, 47, 48; 6, 52, 83, 6,
52, 83; 7, 60, 76, 81; 8, 45, 46, 58; 9, 80,
101; 10, 41; 11, 49, 74; 12, 51
Habibian, M.H. 8, 84
Harper, Charles A. 2, 117
Hart, Barry 5, 129
Haydon, Edwin 2, 70
Hayes, James 9, 68; 10, 42, 43; 12, 40
Hazellwood, James 10, 47
Hellyer, David 3, 38; 4, 69; 5, 76; 6, 80; 9, 76
Hess, LaVerne D. 11, 141
Hill, Richard F. 1, 87
Hillenkamp, F. 4, 145
Hirsch, Jan 3, 91
Hunter, P.S. 6, 68
Jacobus, N. 4, 111
Janocko, P. 6, 105
Jenkins, Ron 11, 112
Jensen, O.J. 9, 124
Johansen, Neil G. 6, C1
Johnson, Robert I. 12, 74
Johnson, W.C. 1, 107
Jones, Robert R. 1, 9; 2, 11; 3, 9, 77; 4, 11,
98, 99; 5, 11; 6, 13, 59, 139; 7, 11; 8, 3, 62
9, 11; 10, 11; 11, 11; 12, 9, 58
Jueneman, Frederic B. 1, 13; 2, 17; 3, 13; 4,
17; 5, 15; 6, 19, 111; 7, 17; 8, 17; 9, 17, 10,
17, 42; 11, 17; 12, 13
Kalinowski, Joseph J. 2, 105
Katz, Elena 6, C1
Kaufmann, R. 4, 145
Keller, A.C. 4, 123
Koppi, Joseph 9, 56, 58
Landvater, John 7, 97; 8, 75; 9, 129
Langeler, Gerald H. 10, 153
Lapp, M. 11, 116
Lars, R.J. 6, 105
Lister, Daniel 6, 123
McFarland, D. 6, 105
Magin, Donald F. 10, C6
Michnowicz, J.A. 4, C11
Mosbacher, C.J. 1, 77, 93; 2, 96, 100; 4, 74
5, 154; 6, 43, 90, 107
Namensau, Cederick B. 10, 220; 11, 194
Nelson, J.A. 9, 132
Nelson, Jeanne 9, 68
Newman, Theodore R. 12, 90
Ogan, Kenneth 8, C1
Padera, Frank 10, 146
Palenik, Skip 3, 85
Paola, C.R. 5, 145

Parlee, N.A.D. 2, 122
Parnell, James A. 10, 160
Pawlowski, Henry 7, 92
Perkals, S. 6, 105
Perry, C.M. 11, 116
Penton, Zelda 5, C7
Princen, L.H. 6, 90
Przybylski, T.M. 9, 142
Purser, Kenneth H. 11, 127
Radding, Alan 9, 96; 11, 53, 106
Raj, K. 3, 115
Ranger, Craig B. 9, 134
Reynolds, R.S. 5, 103
Rhes, John 2, 70; 4, 90; 7, 70
Ronald, Kathleen 5, 75; 154; 7, 49
Rooney, Terrence A. 9, 142; C1
Rosenau, Milton D. 1, 100
Roth, Allen R. 5, 123
Ruzic, Neil P. 1, 127; 2, 151; 3, 131; 4, 169;
5, 165; 6, 155; 7, 121; 8, 117;
9, 163; 10, 163; 11, 157; 12, 107
Russell, Allen S. 11, 135
Ryan, T.H. 1, C6
Schnerr, Gary 6, 123
Scholes, William A. 3, 31; 4, 66; 70, 5, 56
Selby, Ian A. 6, 52; 11, 56
Sullivan, John J. 3, 103
Silverman, Ann 7, 92
Smithwick, Jack 9, 146
Stambler, Irwin 1, 35, 44; 2, 28, 49, 54, 60,
3, 46, 62; 4, 80, 88; 5, 49, 62, C8; 6, 51, 67,
88; 7, 50, 66; 8, 48, 50; 9, 52, 64, 88, 90, 10,
50, 58, 62; 12, 42
Stutz, D.E. 7, 103
Sullivan, John J. 12, 99
Sullivan, Thomas F.P. 9, 121
Thomas, E.J. Jr. 2, 96; 8, 90
Thomas, H.L. 5, 108; 7, 86
Thompson, Brian 3, C3
Trachman, Edward G. 6, 117
Trapnell, Ned 3, 32; 5, 51
Troinger, J.D. 5, 133
Trumbo, Howard 10, 152
Tully, Hal 1, 33; 3, 32; 5, 51; 6, 92; 11, 96
Vandemark, Frank 3, C6
Vanderbilt, Byron M. 5, 66
Vanderwielen, A.J. 1, 80
Wake, W.C. 8, 94
Warshaw, S. 11, 116
Wheller, B.D. 4, 111
Wickersheim, K.A. 12, 82
Wilder, Joseph 3, 105
Wolfe, R.C. 9, 114
Wyatt, Brad 1, 33, 34; 2, 48; 3, 33; 4, 62;
5, 45; 7, 6, 64
Yaron, Giora 11, 141
Young, Dennis A. 1, 64; 2, 52, 92; 4, 77, 5,
84, 104; 6, 56; 7, 49, 82; 8, 54, 60; 9, 68, 86;
11, 50, 54

You Need the Authoritative First Aid Book for Toxic Gases

Your safety depends upon how quickly
you take first aid action . . . if you or your
co-workers suffer exposure.



Effects of Exposure to
Toxic Gases/First Aid
and Medical Treatment,
from Matheson discus-
ses hazards of every
commercially available
toxic or hazardous gas. You should have a
copy, so should your local Emergency
Room, so should your company doctor.

New 2nd Edition
Send for your copy today \$15.00

Matheson
Lyndhurst, New Jersey 07071



Graphited Penetrating Lubricant

Leaf Springs...it penetrates be-
tween leaves of the springs and
supplies lubrication.

Locks...it carries graphite into
the tumblers—loosens them
and leaves a film of lubricating
graphite.

Outdoor Hinges...one company
reported "Penephite" saved
\$1200, a year in broken alu-
minum hinges.

Auto Break-Ins...Penephite in
oil and fuel helps break in new
equipment by depositing a pro-
tective film of graphite on bear-
ing surfaces.

A combination of oils, solvents and micron size graphite in
colloidal suspension. Takes graphite into infinitely small spaces
where it adheres to the metal and supplies long lasting lubri-
cation in adverse conditions, hot, cold, wet or dry—also pre-
vents rust.

*Try Penephite with the aerosol can. If it
pleases you pay the bill otherwise return
the gallon and the charge will be cancelled.
Keep the aerosol can with our compliments.*

1 gal. can Penephite \$7.95
1 Aerosol can Penephite 3.00

VALUE \$10.95
PENEPHITE DEAL \$ 9.85
*Plus Transportation

KANO LABORATORIES
1086 Thompson Lane
Nashville, TN 37211

